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**DEPARTMENT OF DEFENSE**

# annual report



of the

**OFFICE OF CIVIL DEFENSE**

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**DEPARTMENT OF DEFENSE**

**ANNUAL REPORT**  
of the  
**OFFICE OF CIVIL DEFENSE**



**FOR FISCAL YEAR**  
**1962**

UNITED STATES GOVERNMENT PRINTING OFFICE : 1962

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***Letter of Transmittal***

THE SECRETARY OF DEFENSE  
WASHINGTON

*November 24, 1962*

DEAR MR. PRESIDENT:

In compliance with Section 406 of the Federal Civil Defense Act of 1950 and Section 5 of Executive Order 10952 of July 20, 1961, I submit herewith the first annual report of the Office of Civil Defense covering the civil defense functions you assigned to me.

Sincerely,

A handwritten signature in dark ink, reading "Robert S. McNamara". The signature is fluid and cursive, with the first name "Robert" and last name "McNamara" clearly legible.

ROBERT S. MCNAMARA

THE PRESIDENT  
THE WHITE HOUSE

III

## CONTENTS

	Page
LETTER OF TRANSMITTAL.....	III
PART I—INTRODUCTION.....	1
PART II—NEW CIVIL DEFENSE PROGRAM.....	5
Shelter Space.....	6
Organization of Civil Defense.....	8
Use of Department of Defense Resources.....	12
Relationship With Other Federal Agencies.....	13
Financial Summary.....	14
PART III—NATIONWIDE FALLOUT SHELTER SYSTEM.....	17
The National Shelter Program.....	17
Fallout Shelter Survey.....	17
Shelter Marking.....	21
Shelter Stocking.....	23
Shelters in Federal Buildings.....	33
Shelter Support Programs and Activities.....	33
Protective Structures.....	33
Professional Development of Architects and Engineers.....	36
PART IV—COMPLEMENTARY CIVIL DEFENSE SYSTEMS.....	39
Attack Warning System.....	39
National Warning System.....	39
State and Local Warning Systems.....	41
National Emergency Alarm Repeater System.....	41
Communications.....	42
Basic System.....	42
Backup System.....	42
Other Activities and New Developments.....	42
Monitoring and Reporting.....	45
Radiological Defense.....	45
Chemical and Biological Defense.....	53
Damage Assessment.....	54
Preattack Assessment.....	55
Postattack Assessment.....	55
Data Base Improvements.....	56
Hazard Probability.....	58
PART V—FEDERAL ASSISTANCE PROGRAMS AND ACTIVITIES.....	59
Technical Assistance and Guidance.....	59
Training and Education.....	61
Financial Assistance.....	63
Surplus Property.....	66
Emergency Supplies and Equipment Inventory.....	66

	Page
PART VI—RESEARCH.....	69
Shelter.....	70
Support Systems.....	71
Postattack.....	72
Systems Evaluation.....	72
PART VII—SUPPORTING ACTIVITIES.....	75
Public Information.....	75
Industrial Participation.....	78
Labor Support.....	80
International Activities.....	81
Advisory Committees.....	82

## APPENDIXES

1. Executive Order 10952.....	83
2. Department of Defense Memorandum Relating to Establishment of the Office of Civil Defense.....	87
3. Department of Defense Directive No. 5140.1, Subject: Assistant Secretary of Defense (Civil Defense).....	89
4. Department of Defense Instruction No. 5030.21, Subject: Advisory Committee on the Design and Construction of Public Fallout Shelters.....	95
5. Department of Defense Instruction No. 5030.20, Subject: Industry Advisory Committee on the National Emergency Alarm Repeater (NEAR) System.....	97
6. Department of Defense Memorandum Relating to Civil Defense Advisory Committee on the Medical Self-Help Program.....	99
7. Governors' Conference Report and Resolution on Civil Defense.....	101
8. Michigan State University Poll.....	107

## ILLUSTRATIONS

1. OCD Organization Chart.....	10
2. OCD Regions.....	11
3. Standard Fallout Shelter Sign.....	22
4. Community Fallout Shelter Water Storage Container.....	24
5. Community Shelter Survival Rations.....	26
6. Community Shelter Sanitation Kit SK-4 (designed to serve 50 persons).....	27
7. Community Shelter Medical Kit A (designed to serve 50-65 persons)...	29
8. Community Shelter Medical Kit C (designed to serve 300-325 persons)...	30
9. Community Shelter Radiation Kit CD V-777-1.....	32
10. Attack Warning System (AWS).....	40
11. National Communications System No. 1 (NACOM 1).....	43
12. Implementation Plan for National Communications System No. 2 (NACOM 2).....	44
13. Radiological Defense Monitoring Kit CD V-777.....	47
14. Growth of Federal Radiological Fallout Monitoring Network.....	48
15. Growth of State and Local Radiological Fallout Monitoring Network...	50
16. Procurement of Radiological Defense Instruments.....	52

# CONTENTS

VII

## TABLES

	Page
1. Financial Summary for Fiscal Year 1962.....	15
2. Fiscal Year 1962, Phase I Shelter Survey Results (97.5 percent complete).....	19
3. Fiscal Year 1962 Federal Contributions for Supplies, Equipment, Facilities, and Training.....	64
4. Federal Contributions for Civil Defense Personnel and Administrative Expenses.....	65
5. Federal Surplus Property Transferred to State and Local Governments for Civil Defense Purposes.....	67
6. Obligation of Funds for Research, Fiscal Year 1962.....	70

## **PART I**

### **INTRODUCTION**

President Kennedy, on May 25, 1961, in his message to Congress on *Urgent National Needs*, called for a new and revitalized civil defense program to protect the civilian population of the United States from the hazards of possible nuclear war.

The President said:

One major element of the national security which this Nation has never squarely faced up to is civil defense. This problem arises not from present trends but from national inaction in which most of us have participated. In the past decade we have intermittently considered a variety of programs, but we have never adopted a consistent policy. Public considerations have been largely characterized by apathy, indifference and skepticism; while at the same time, many of the civil defense plans proposed have been so far-reaching or unrealistic that they have not gained essential support.

Fiscal year 1962 saw the realistic civil defense program the President called for launched and well underway.

Before describing the actions taken to implement the President's directive, and reporting the progress made in fiscal year 1962, it is necessary to understand the situation that obtains and the concepts that condition the structure of today's civil defense. These were outlined by the Assistant Secretary of Defense for Civil Defense, in part, as follows:

Defense Department studies of conditions in this country under nuclear assault make it quite plain that each local community would have to stand on its own feet during an attack and for some weeks thereafter. The capacity to survive this ordeal would depend largely on previous organization, planning and preparation to save lives and to restore services. This work must be done now, not during an emergency, and it must engage the energies of those of you who would carry out these plans if our country were ever attacked. . . .

It is a strange anomaly of the nuclear age that as our political and economic interdependence and centralization are increased by advancing technology, we must at the same time prepare for the possibility of a sudden decentralization and a sudden revival of local self-reliance more characteristic of the earlier frontier days of our Nation. The surviving towns and cities following a nuclear attack would indeed be frontiers in a communal and national life which energetic leaders would put together again.

Ordinary individuals may have a personal option to ignore the problem of self-preservation in a nuclear attack; but Government officials do not. Leadership, from the President on down, has little choice but to carry out this difficult task of building protection into the life of the country.

The conditions that dictate the shape of this program are two:

1. Most of the country would be blanketed with fallout radiation under a nuclear attack. Forty to 120 million Americans would probably survive the

blast and heat of nuclear explosions because of their location but would die slow deaths from radiation.

2. The country has a vast resource in shielding from radiation. Buildings and underground facilities that exist for other purposes can shelter over a third of the population. We are a resourceful, technically skilled people capable of adapting our buildings and homes to low-cost shielding from radiation. These facilities and this technical competence needs only to be mobilized.

Federal, State, and local civil defense efforts are moving rapidly to the day when there will be a real capability for saving large numbers of people who would otherwise be killed under nuclear attack. Although this is not true today, the results of a great deal of quiet and effective work will reach the surface over the coming months. . . .

We started down this road last year. When the President returned from a grim meeting in Vienna with the Russian Premier he told the American people:

**"In the event of an attack, the lives of those families that are not hit in a nuclear blast and fire can still be saved—if they can be warned to take shelter and if that shelter is available. We owe that kind of insurance to our families—and to our country."**

At the same time he assigned responsibility for civil defense to the Secretary of Defense, reflecting a decision that civil defense must be an integral part of the total national defense. In addition, he asked Congress for an increased appropriation which raised the size of the Federal civil defense program to about five times the average of preceding years. Coming at the height of the Berlin crisis, these events impressed upon the American people that measures of self-protection were important and possible.

Some newspapers speculated that the President was calling for a crash shelter program, and that his action was related to the Berlin crisis. The result was that for the first time the American people began to comprehend what nuclear war might mean to them. Last fall a debate raged across the land whether shelters were necessary or feasible and what should be done to protect the civilian population against nuclear attack. By the turn of the year, Berlin had quieted down somewhat and public attitudes towards the shelters changed. Some people merely wanted to think of other things. Others were actively hostile to the notion of accepting the possibility of nuclear war for any purpose, including self-protection. The majority, in my opinion, are still concerned, but uncertain what to do. Most of these are waiting for more specific guidance through Federal, State, and local programs which would resolve their uncertainty.

The fact is that the President first announced the necessity and feasibility of civil defense about 2 months before the height of the Berlin crisis and the statement I have just quoted. A program carrying out the broad lines of the President's civil defense statement of May 25, 1961, was developed during the early fall and decided upon by Secretary McNamara and the President last November. This program has the same priority today as it had when it was adopted, and it is the same program, meeting the same imperative demands of the nuclear age as we now understand them.

It is not a crash program. It could not be a crash program. We estimate it will take in the neighborhood of 5 years to meet the national shelter requirements by fully exploiting existing shelter space and other low-cost opportunities to shelter people. The President never intended to initiate a

crash program. His views on civil defense before the Berlin crisis, during it, and today, have not changed.

Specifically, major actions taken to launch the President's new civil defense program were:

1. Vital civil defense operational functions were assigned to the Secretary of Defense by Executive Order 10952, effective August 1, 1961.<sup>1</sup>

2. An additional \$207.6 million was appropriated for fiscal year 1962, to strengthen civil defense. This and funds transferred to the Department of Defense (DOD) from a prior appropriation for the Office of Civil and Defense Mobilization made available to DOD approximately \$256.8 million to finance civil defense.

3. Civil defense functions were reorganized under the Secretary of Defense to make possible a coordinated operation using military and nonmilitary resources for protection of the American people.

4. A functional internal civil defense structure, including eight regional offices under an Assistant Secretary (Civil Defense), was established, adaptable and responsive to the new program.

5. National headquarters were transferred from Battle Creek, Mich., to Washington, D.C.

6. Department of Defense resources were employed in support of the new program.

7. Authority for civil defense functions of other Federal agencies was strengthened and an effective working relationship established between them and DOD.

8. More than 55 million fallout shelter spaces were located in existing buildings, and approximately \$30 million was saved by using advanced data-gathering techniques in the process.

9. At a cost of approximately \$2.07 per shelter space, procurement was initiated for about 60 percent of the provisions needed to stock the shelters that were located in existing buildings. By using 81 strategically located warehouses, an estimated 85 percent of the supplies will be available for distribution within 25 miles of the shelter destinations.

10. The training and education effort was redirected and expanded: More than 261,000 persons were graduated from civil defense adult education classes, 6,690 were graduated from OCD schools, and 11,503 completed medical self-help training courses.

11. An expanded and strengthened research program, supported by more than \$16 million in obligated funds and including 208 specific research tasks under contract, was designed to provide balance and perspective for long-range development of civil defense.

The details of these developments are contained in the body of this report.

<sup>1</sup> See Appendix 1.

## **PART II**

### **NEW CIVIL DEFENSE PROGRAM**

The President's new civil defense program is based principally on provision of a nationwide system of fallout shelters. All studies and analyses of possible nuclear attack patterns on the United States demonstrate that the fallout shelters can save more lives than any other feasible protective measure, and that the number of persons saved would decrease only slightly as the power and number of weapons increased.

The program is a balanced one. Although provision of adequate fallout shelter is its principal component, it provides the complementary civil defense systems needed to make it effective under all emergency conditions. These systems include:

1. A nationwide alert and warning system to let people know when to go to shelters.
2. Communication systems to keep people informed of what is happening and to direct population movements and emergency operations.
3. Nationwide monitoring and reporting systems to collect, evaluate, and disseminate information on radioactive fallout.
4. A damage assessment system that provides for preattack estimation and postattack assessment of damage. Information developed from this system guides preattack planning and is essential for post-attack operations.

The program relies upon active participation by all levels of government, by all types of private organizations, and by individuals responsible for the safety and welfare of others. Federal assistance, tangible and intangible, to stimulate this participation is part of the program, such as technical assistance and guidance, training and education, financial assistance, and donation of surplus property.

The program includes supporting activities to inform the public of civil defense developments, to gain the participation of industry and national organizations, to maintain liaison with international civil defense, and to obtain expert guidance and recommendations from advisory committees.

The new program utilizes carefully organized research to give perspective and balance to the development of the shelter system and to all the complementary systems designed to make fallout shelters practical and habitable in an emergency.

As planned during fiscal year 1962, the program will require five years for completion. During this time, institutions, civilian life, and State and local governments will be involved. An increasing amount of protection will be developed as enemy destructive capability becomes greater.

### SHELTER SPACE

The first and most significant action under the new program was to determine the number of shelter spaces needed to protect the population and to design the means for obtaining them. The most reliable estimates call for approximately 235 million spaces to provide nationwide protection from radioactive fallout by 1967. This takes into consideration population increases and additional shelter spaces needed as a result of population concentrations in industrial and residential areas at differing times.

For the first time in the Nation's history, a realistic plan has been designed to provide the necessary number of shelter spaces. Methods planned during fiscal year 1962 for obtaining the required 235 million shelter spaces by the end of fiscal year 1967 include:

1. *The national survey.*—This nationwide program, well underway by the end of fiscal year 1962 (see the National Shelter Program in Part III), was expected to produce at least 70 million shelter spaces. More than 55 million of these were located through use of fiscal year 1962 appropriations. Contingent upon future appropriations, up to 4 million additional spaces per year are expected from this program.
2. *The Federal buildings program.*—This incorporates fallout shelters into Federal buildings (see Shelters in Federal Buildings in Part III) and is expected to provide approximately 5 million shelter spaces. About 0.5 million spaces are being obtained with fiscal year 1962 appropriations. The development of 4.5 million additional shelter spaces from this program is contingent upon future appropriations.
3. *Proposed shelter incentives.*—A proposed shelter incentives program, contingent upon future legislation and appropriations, would produce an estimated 20 million shelter spaces per year for a total of approximately 100 million spaces.

In February 1962, the Administration proposed legislation to the Congress (an amendment to the Federal Civil Defense Act of 1950) which would enable the Federal Government to "make payment to any nonprofit institution engaged in health, education, or welfare activities constructing or modifying approved public shelter space which meets shelter standards and criteria prescribed under the provisions of this act."

This proposed legislation would encourage the development of fallout shelter space in nonprofit schools, hospitals, and welfare institu-

tions, through payment for a portion (or all) of the estimated cost of providing the shelter space. Payment would not exceed \$2.50 per square foot of approved fallout shelter space which:

(1) Meets shelter standards prescribed by the Office of Civil Defense.

(2) Is located in an area where local civil defense officials certify existing shelter is inadequate to meet the needs under approved local shelter use plans.

(3) Can shelter 50 or more persons in one structure.

(4) Would be immediately available for public use as shelter in an emergency.

One of the compelling reasons for the proposed Shelter Incentives Program is that most of the potential shelter spaces found in the survey of the National Shelter Program are in downtown urban areas. Part of them would be usable only for the working daytime population, and out of reach of the nighttime, residential population. Schools usually are well located as shelter sites with respect to residential population.

For purposes of the proposed program, nonprofit institutions "engaged in health, education, or welfare activities" are defined as follows:

(1) *Health*.—General or special hospitals, clinics, nursing and convalescent homes administering to the health needs of the public.

(2) *Education*.—Those institutions which conduct regularly scheduled curricula of instruction, and are approved or licensed by the State or local government.

(3) *Welfare*.—Those institutions primarily engaged in helping individuals adjust to their social environment, or in providing for the care of individuals to improve their general well being.

Under the proposed program, the nonprofit status of an institution would be determined by standards used under the Internal Revenue Code.

(4) *Private shelters*.—Approximately 60 million shelter spaces, about 12 million annually, are expected to be developed by industry, institutions, home owners, and others not eligible for Federal monetary grants for shelter construction. (See Shelter Support Programs and Activities in Part III, and Industrial Participation in Part VII.) Although the private response started slowly, it is expected to accelerate in proportion to the activity in the Federal programs. As the impact of direct Federal action is felt, a combination of factors will work in favor of private shelter development; e.g., increased public understanding from tangible Federal programs, accelerated Federal technical assistance and guidance, and the influence of Federal example.

(5) *Shelter summary*.—Following is the projection for obtaining 235 million shelter spaces:

Source	Millions of spaces
National Shelter Program-----	70
Shelter in Federal buildings-----	5
Proposed Shelter Incentives Program-----	100
Private initiative (home owners, industry, and others)-----	60
Total-----	235

### ORGANIZATION OF CIVIL DEFENSE

The organization for carrying out the President's new civil defense program evolved chronologically as follows: During July 1961, civil defense functions remained part of the responsibility of the Office of Civil and Defense Mobilization (OCDM). On July 20, 1961, the President issued Executive Order 10952,<sup>2</sup> assigning civil defense functions to the Secretary of Defense, effective August 1, 1961. The Secretary placed his Special Assistant in charge of civil defense affairs for an interim period in which to establish an Office of Civil Defense.<sup>3</sup>

On August 31, 1961, the Secretary, by departmental directive,<sup>4</sup> established the Office of Civil Defense to be headed by one of the Assistant Secretary of Defense positions authorized by the National Security Act of 1947, as amended. The major civil defense functions and responsibilities delegated to the Secretary of Defense by Executive Order 10952 were assigned to the Assistant Secretary of Defense (Civil Defense) with appropriate support from all elements of the Department.

The organization and operation of the Office of Civil Defense have been guided from the outset by four principles which the Secretary of Defense enunciated in his statement of July 20, 1961. He said, in part:

1. *The Civil Defense effort must remain under civilian direction and control, involving, as it does, the survival of every citizen. It requires the closest and most sympathetic cooperation between the Federal civilian authorities and State and local governments.*

2. *In the age of thermonuclear war, civil defense must be integrated with all aspects of military defense against thermonuclear attack.*

3. *The civil defense functions of the Department must not be permitted to downgrade the military capabilities of our Armed Forces.*

4. *Whatever expenditures are undertaken for civil defense projects must be directed toward obtaining maximum protection for lowest possible cost.*

At the end of fiscal year 1962, OCD was organized according to a functional pattern (see fig. 1), adaptable and responsive to the new

<sup>2</sup> See Appendix 1.

<sup>3</sup> See Appendix 2.

<sup>4</sup> See Appendix 3.

civil defense program. Of a total personnel ceiling of 1,148 positions, 448 were authorized for headquarters, Washington, D.C., 600 for 8 regional offices (see fig. 2), and 100 for field training centers and warning offices.

This organization was largely developed by a staff of 42 persons assembled at the Pentagon early in fiscal year 1962, to complete reorganization, develop the new program, and launch the new operations under the program. The staff included personnel employed directly from outside the Government and certain key transferees from OCDM. On September 3, 1961, effective August 1, 1961, 1,106 OCDM personnel were transferred to the Office of Civil Defense, DOD. Of these, 41 were already in Washington, D.C., 554 at Operational Headquarters, Battle Creek, Mich., 427 at 8 regional offices (see fig. 2), and 84 engaged in other field activities.

Comparison of the personnel data above reveals three important facts:

1. The total number of authorized positions, 1,148, remained unchanged, although the program administered was greatly expanded.
2. The aggregate regional office staff authorized was strengthened from 427 to 600 positions, approximately 40 percent.
3. Headquarters personnel were moved to Washington, D.C.

*Unique program.*—The President's civil defense program is unique in requiring an extraordinary combination of a wide range of very different skills. This fact is well illustrated by a few examples. Consider the type of people and the organization needed to operate the procurement, transportation, warehousing, and installation of shelter supplies for a nationwide shelter program in contrast to the personnel requirements for continual reevaluation of assumptions made on the nature of attack and its immediate effects. Compare the task of mobilizing technical resources of architectural and engineering professions with efforts to create understanding of the idea of shelters in schools and acceptance by school boards, parent-teacher associations, and school staffs. In addition, operating schools for training State and local civil defense officials in a wide range of technical subjects is indeed different from developing and operating a vast system of data-gathering and analysis, which is the heart of the shelter survey program.

These complex aspects of the expanded civil defense program were administered without increasing the ceiling of 1,148 personnel. Partly this accomplishment was made possible by the expeditious use of the vast resources of the Department of Defense, and partly it is a tribute to the quality of personnel associated with the program.

*Regional offices.*—Increase of regional staffs was necessitated by the increased operational responsibilities required of them. By the end

# **DEPARTMENT OF DEFENSE OFFICE OF CIVIL DEFENSE**

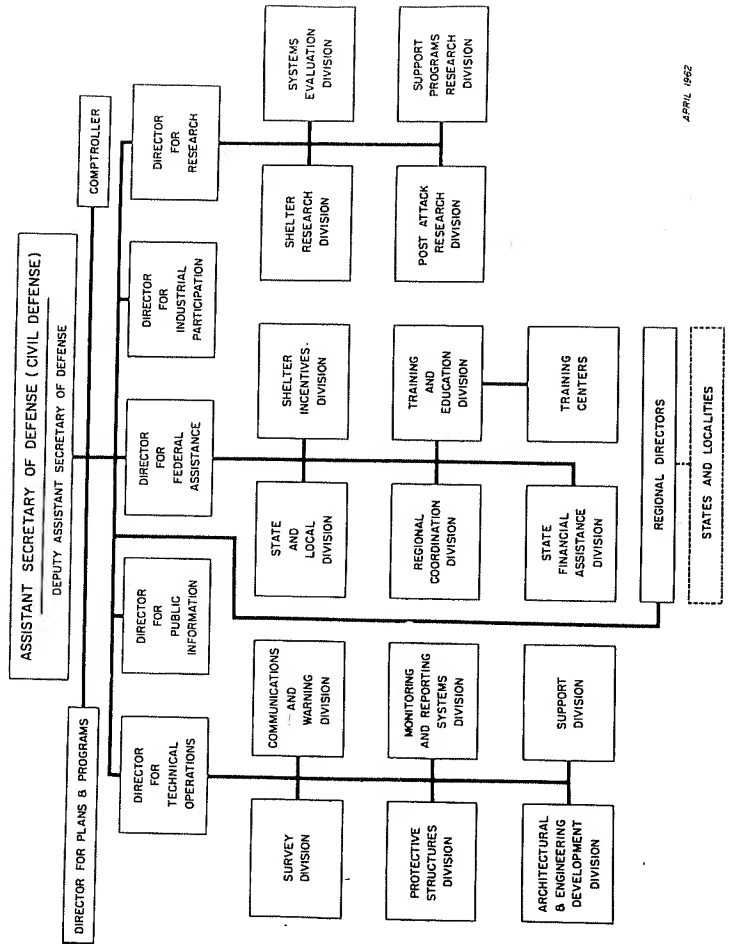


Figure 1.—OCD organization chart.

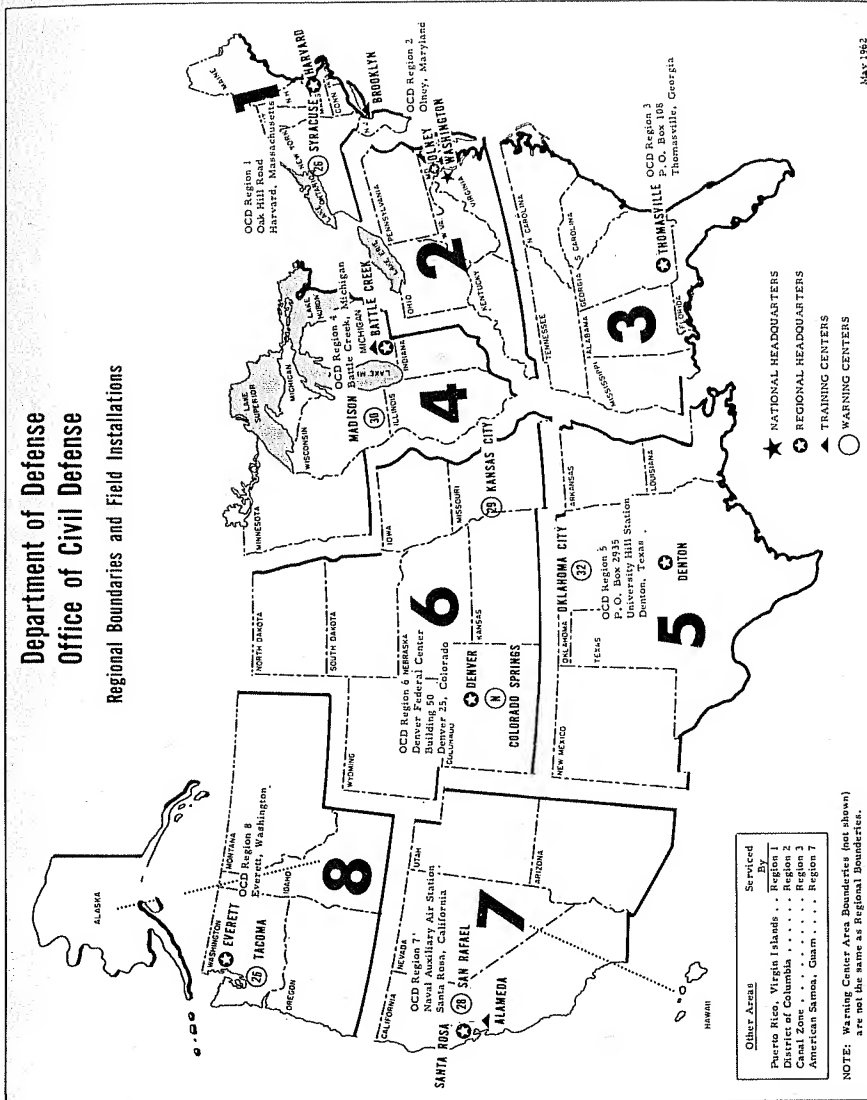


Figure 2.—OCD regions.

of fiscal year 1962, most OCD operational activities with the States were carried on through its eight regional offices.

Subject to final review in special cases, OCD regional offices were readied for handling commitment of funds for Federal matching assistance to the States and for the proposed shelter incentives program. Regional offices are further being given the technical staff needed to support State and local survival planning and State and local participation in the OCD shelter survey, radiological monitoring, warning systems, and communications.

*Movement of Staff.*—Early in fiscal year 1962, as the reorganization of civil defense proceeded, it became evident to management that the 600 miles separating headquarters from the staff at Battle Creek seriously hampered operations. The new management staff had to establish confidence in the personnel working with them, and it was necessary to reorient the Battle Creek staff to reflect the new program. Moreover, if full use of Defense Department resources was to be realized, the staff would have to be in Washington.

The decision to move the Battle Creek staff was announced on December 5, 1961. As space became available, essential personnel were gradually moved from Battle Creek to Washington. The move was mainly completed by the end of the fiscal year.

OCD experienced a heavy attrition of personnel in the move. Approximately 44 percent of the staff was lost as a result of transfer, retirement, resignation, and other reasons. This furnished the opportunity for employment of new talent which, with the employees able to make the move to Washington, constituted an effective working staff.

### USE OF DEPARTMENT OF DEFENSE RESOURCES

The new civil defense program was strengthened and given impetus by the use of DOD resources. In fiscal year 1962, this was evident in several areas of operation:

1. As explained in Part III, the Army Corps of Engineers and the Navy Bureau of Yards and Docks are carrying out the basic portion of the National Shelter Program. They are also being used in other areas of shelter program operations.

2. The Defense Supply Agency manages the logistics of OCD supplies. This includes procurement, receipt, storage, and issuance to State and local governments of all shelter supplies, and management of emergency equipment and supplies for State and local governments.

3. Preparations were completed for the Defense Communications Agency to take over civil defense communications early in fiscal year 1963. (See Communications, Part IV.)

4. Printing and distribution of all OCD publications were taken over by the Adjutant General's Office of the Army.

5. Legal services and legislative liaison are furnished to OCD by the General Counsel of the Department of Defense and the Assistant to the Secretary of Defense (Legislative Affairs).

6. Although OCD has a public information program closely coordinated with its training and education and other programs (see Public Information in Part VII), the Office of the Assistant Secretary of Defense (Public Affairs) continues to perform certain civil defense public information functions. This arrangement assures full coordination of public information common to both military and nonmilitary programs.

7. In developing damage assessment, warning, shelter, and other civil defense systems, OCD has significant assistance from DOD specialized services such as the Defense Atomic Support Agency and the Weapons System Evaluation Group, which provide means for broad-based and continuing evaluations of emergency conditions with which civil defense is designed to cope. With data from these sources, the OCD staff can determine the adequacy of its operational plans.

8. Among the functions assigned to the Secretary of Defense by Executive Order 10952 is that of providing emergency assistance to State and local governments in a postattack period, including water, debris clearance, fire, health, traffic, police, and evacuation capabilities. The military services, being the major means of operations available to the DOD, would necessarily be relied upon to provide such assistance, and the Military Departments are helping to plan for this purpose. The Secretary of Defense has approved recommendations to award retirement point credit to Standby Reserve officers for participation in State and local civil defense work. Additional recommendations for military assistance to State and local governments in postattack operations are being prepared.

#### RELATIONSHIP WITH OTHER FEDERAL AGENCIES

Executive Order 10952 assigned major civil defense responsibilities to the Department of Defense. It also provided that the Director, Office of Emergency Planning, would advise and assist the President in connection with the total civil defense program and would be responsible for the continuity of government programs at the Federal, State, and local level.

Executive Order 10958 assigned certain civil defense responsibilities with respect to food and medical stockpiles to the Secretaries of Agriculture and Health, Education, and Welfare, respectively.

In February 1962, nine Executive Orders (10997-11005) which replaced previous emergency preparedness orders were signed by the President. They generally prescribe the emergency preparedness functions of the several departments and agencies under all emergency conditions. To a limited degree, these Executive orders include civil defense functions. The activities involved are closely related to the normal functions performed by the departments and agencies. These civil defense activities must be carried out in consonance with national civil defense plans, programs and operations of the Secretary of Defense.

The Department of Defense is achieving the necessary coordination of the civil defense activities performed by the other departments and agencies through the use of contractual arrangements with them. However, the Office of Civil Defense does not fund the functions performed by these agencies under these Executive orders.

The Office of Civil Defense, however, has entered into certain contractual arrangements with other departments and agencies to use their special competence in assisting the Office of Civil Defense to perform its functions under Executive Order 10952. Examples of such action include compilation of damage assessment data and research projects. Improvements have been made in defining the desired product and in relating actual performance to the funds expended. Various relationships with other Federal agencies are described in applicable sections of this report.

#### FINANCIAL SUMMARY

Approximately \$256.8 million was made available to the Office of Civil Defense for obligation in carrying out civil defense operations during fiscal year 1962. Of this total, \$207.6 million was from an appropriation to the Department of Defense for this purpose. The remaining amount of approximately \$49.2 million was derived by transfer of \$49.1 million to the Department of Defense from 1962 and prior appropriations for the Office of Civil and Defense Mobilization and \$0.1 million was received in reimbursable orders.

At the end of the year, OCD had obligated more than \$248.6 million. The \$8.1 million unobligated includes \$2.3 million carried over into fiscal year 1963 for construction of facilities, leaving a balance of \$5.8 million no longer available. The amounts obligated for specific operational programs and activities are shown in table 1.

TABLE 1.—*Financial summary for fiscal year 1962*

[In thousands]

Budget activity	Funds available for obligation	Funds obligated	Unobligated balance
Total.....	<sup>1</sup> \$256, 790	<sup>1</sup> \$248, 646	\$8, 144
Shelter.....	158, 863	157, 904	959
National shelter survey.....	59, 000	58, 414	586
Equipment and supplies stockage.....	81, 013	80, 738	275
Shelter in Federal buildings.....	17, 500	17, 443	57
Shelter support programs.....	1, 350	1, 309	41
Warning and detection.....	29, 850	29, 846	4
Warning and alert.....	5, 120	5, 118	2
Radiological instrument procurement and maintenance.....	24, 730	24, 728	2
Emergency operations.....	13, 101	12, 097	1, 004
Training, education, and public information.....	6, 914	6, 490	424
Survival services.....	1, 557	1, 556	1
Communications and control.....	3, 479	2, 000	579
Damage assessment.....	1, 151	1, 151	0
Research and development.....	19, 075	17, 993	1, 082
Financial assistance to States.....	21, 138	18, 802	2, 336
Management.....	12, 424	11, 965	459
Construction of facilities.....	2, 339	39	2, 300

<sup>1</sup> Excludes July 1961 obligations of \$1,483 thousand incurred by the Office of Civil and Defense Mobilization but transferred to the Department of Defense for liquidation.

## **PART III**

### **NATIONWIDE FALLOUT SHELTER SYSTEM**

The nationwide fallout shelter system is planned to produce approximately 235 million shelter spaces by the end of fiscal year 1967. Proposed methods for attaining this goal are described in Part II under *Shelter Space*. This part of the report describes progress achieved towards this goal in fiscal year 1962.

#### **THE NATIONAL SHELTER PROGRAM**

Objectives of the National Shelter Program are to: (1) Locate suitable fallout shelters in existing buildings and facilities, (2) mark them with distinctive signs, and (3) stock them with food and water, medical and sanitation kits, and radiation measuring instruments.

A public fallout shelter marked and stocked under this program must meet certain minimum requirements. It must have a protection factor of at least 100, which means that radiation inside the shelter would be reduced to one-hundredth or less of that existing outside. Space for at least 50 persons must be available. A minimum of 10 square feet per person is required in adequately ventilated shelters. In unventilated space, 500 cubic feet per person are required. For both, there must be one cubic foot of secure storage space per person.

#### **Fallout Shelter Survey**

To obtain qualified manpower for the survey, OCD sponsored a 2-week course in fallout shelter analysis. The course was offered successively at two military and eight civilian schools. (See Professional Development of Architects and Engineers, Part III.) Professional architect-engineer firms, at their own expense, sent one or more of their supervisory personnel to these courses.

Using procedures and techniques as developed and specified by OCD, the Army Corps of Engineers and the Navy Bureau of Yards and Docks contracted with the participating architect-engineer firms to make the survey and to supervise their work in two phases. Contract negotiations for Phase I were completed by March 13, 1962. Between March 29 and June 30, 1962, 644 contractual actions were negotiated for Phase II.

The primary purpose of Phase I operations was to identify potential fallout shelter areas in all public and private buildings having a fallout protection factor of 20 or higher, and capacity for at least 50

persons. Contractors were to analyze day and night population data and determine potential public fallout shelters in assigned geographical areas, and collect shielding data for machine computation of protection factors of buildings. Only structural data on shielding, not data on fitness for occupancy or modification, were to be sought.

Phase II operations were to make a detailed onsite survey of buildings identified in Phase I as suitable for fallout shelter, devise means for improving the shelter potential of buildings having a less than 100 fallout protection factor, and survey selected special facilities such as caves, mines, and tunnels, for shelter suitability.

*FOSDIC form and computer services.*—Test surveys made late in 1961, including Phases I and II, provided necessary experience in the collecting and analyzing of data and the pricing of contracts. It made evident that time and money could be saved in Phase I if the contracting architect-engineers were relieved of the laborious task of analyzing the collected data. Calculating protection factors and other required data involved complex repetitive operations. A high-speed computer in a central location could handle such complex data and produce a more accurate answer in one-tenth of a second. Done manually, this required 2 to 5 hours. Consequently, procedures were adopted to separate data collection from data analysis and the processing of data by mechanical means. Later, greater use of automatic data processing cut survey costs several million dollars.

Adaptation of the FOSDIC form (an acronym for *Film Optical Sensing Device for Input to Computers*) for use in the fallout shelter survey was the major breakthrough in improving the electronic processing of survey data. This form was originally developed by the Bureau of the Census to record the voluminous information gathered in the 1960 census.

The voluminous raw data on building parts, stories, setbacks, and basements, component dimensions, and specified structural details were entered by the contractor on the specially prepared FOSDIC forms. These forms were sent to the contracting officers (Corps of Engineers or Bureau of Yards and Docks) and then to Jeffersonville, Indiana, to be microfilmed by the Bureau of the Census. Microfilms were then sent to the Bureau of the Census installation in Suitland, Maryland, for processing on an electronic reading machine, where the data were converted into computer codes on magnetic tape.

Using magnetic tapes, the National Bureau of Standards in Washington, D.C., by means of an electronic computer, determined the protection fallout factor of surveyed structures from the data on building geometry, position, and shielding capability and estimated the shelter capacity of each building. The results in the form of computer printouts were available to the contracting officer approximately three weeks

after he forwarded the forms to the Bureau of the Census. The contracting architect-engineers examined the structures and printed listings and corrected the listings if necessary. This machine tabulation is also used for periodic revision of data to provide, at minimum cost, current information on available shelter.

*Result of Phase I operation.*—At the end of the fiscal year, Phase I was 97.5 percent complete. A total of 53,303,566 shelter spaces having a protection factor of 100 or more had been located in 110,323 buildings. (See table 2.) By mid-September 1962, this operation had accounted for 55.7 million shelter spaces.

TABLE 2.—Fiscal year 1962, phase I shelter survey results (97.5 percent complete)<sup>1</sup>

PART A. BUILDINGS SURVEYED			
Total buildings	Rejected	Protection factor 20-99	Protection factor 100 or more
374,308	65,958	198,027	110,323

PART B. PROTECTION FACTOR LESS THAN 100			
Shelter category	Protection factor	Spaces located	Projected to 100% completion
1.....	20-39.....	84,245,956	Million spaces 86.4
2.....	40-69.....	45,995,291	47.2
3.....	70-99.....	19,624,561	20.1
1-3.....	20-99.....	149,865,808	153.7

PART C. PROTECTION FACTOR 100 OR MORE			
Shelter category	Protection factor	Spaces located	Projected to 100% completion
4.....	100-149.....	8,950,462	Million spaces 9.2
5.....	150-249.....	14,617,522	15.0
6.....	250-499.....	13,952,268	14.3
7.....	500-1,000.....	6,116,188	6.3
8.....	Over 1,000.....	9,667,126	9.9
4-8.....	100-over 1,000.....	53,303,566	54.7

PART D. PROTECTION FACTOR 20-OVER 1,000			
Shelter category	Protection factor	Spaces located	Projected to 100% completion
1-8.....	20-over 1,000.....	203,169,374	208.4

<sup>1</sup> Upon completion by mid-September 1962, 55.7 million shelter spaces having a protection factor of 100 or more had been located.

*Shelter License Agreements.*—A basic shelter program action, which was started in Phase I and is continuing in Phase II of the survey, is the signing of license agreements by building owners for use of

acceptable shelter spaces located in the survey. Local governments are responsible for obtaining these agreements.

A special Government form, Fallout Shelter License or Privilege, when signed by the property owner, authorizes: (1) Temporary access by the public to specified shelter space in emergencies, (2) posting and maintenance of shelter signs, (3) maintenance of shelter supplies and equipment on the premises, and (4) Federal and local government inspection. Public use of the shelter is specified as "for the sole purpose of temporarily sheltering persons during and after any and every actual or impending attack." Public access for testing purposes is not granted and, if desired, would have to be separately agreed upon by the owner and local government.

The agreement entails no monetary payment to or by the owner. He may revoke the license unilaterally by sending a 90-day written notice by registered mail to the appropriate local government agency or to the Office of Civil Defense Regional Office. Upon notice of revocation, shelter signs, stocks and equipment stored there would be removed by the local government within the 90-day period. If an emergency should arise during the 90-day period, the shelter still would be available for use.

No special problems with respect to owner liability are expected to arise. Thirty States have enacted provisions of law, similar to the provision of the Model State Civil Defense Act developed and sponsored by the Council of State Governments, which would provide immunity to the owner of real property who licenses the use of such property on the terms contained in the license agreement. These States are:

Alabama	Michigan	Oregon
Arkansas	Mississippi	Pennsylvania
California	Nevada	Rhode Island
Connecticut	New Hampshire	South Carolina
Delaware	New Jersey	South Dakota
Georgia	New York	Utah
Indiana	North Carolina	Virginia
Kentucky	North Dakota	Washington
Maryland	Ohio	West Virginia
Massachusetts	Oklahoma	Wyoming

The Office of Civil Defense has been advised by two principal insurance rating bureaus that execution of the shelter license agreement will not result in an increase in insurance premiums for general liability insurance.

As a matter of general law, the degree of care owed to such occupants of shelter space would appear to be that owed to a gratuitous licensee. An occupant would take the premises as they are. The owner's responsibility is not to willfully or recklessly harm such persons and to point out hidden danger or unsafe conditions. The degree

of care owed to a shelter occupant would be only a step above that owed to a trespasser.

*Progress on Phase II Operations.*—Based principally on data developed in Phase I, Phase II operations were well underway by the end of the fiscal year, but this phase was not expected to near completion for several months.

Contractors inspect buildings to verify fallout protection factors and space estimates obtained in Phase I. They analyze the buildings for shelter habitability and ventilation needs. For substandard shelters having fallout protection factors between 40 and 100, records are made of improvements and estimated costs required to upgrade the fallout protection factor to 100. The Bureau of the Census tabulates and summarizes this information after which it is made available to local governments and shelter owners. However, upgrading of substandard shelter is to be done at the option and expense of property owners.

Approximately 200,000 buildings identified in Phase I will be covered in the more detailed survey of Phase II. An estimated 16,000 special facilities (subways, caves, tunnels, and mines), having protection factors of 40 or higher and potential space for 50 or more persons, will also be surveyed.

### Shelter Marking

Another important Phase II operation underway at the end of the fiscal year was the marking of public shelters that met minimum requirements, and for which license agreements had been signed.

Standard fallout shelter signs furnished by the Federal Government are used. (See fig. 3.) The signs show shelter capacity and are identical for inside and outside marking, except that outside signs are aluminum and inside signs, steel. Contracts were awarded for 400,000 aluminum signs at \$354,000 and for 1 million steel signs at \$345,800. Signs were manufactured and shipped to contracting officers as scheduled. In addition, the Army Corps of Engineers and the Navy Bureau of Yards and Docks were authorized a \$2 million project order for installing shelter signs at approximately 120,000 buildings and special facilities.

Procedure for marking shelters is: (1) Placement by the architect-engineer surveyor of a small OCD black and yellow sticker on shelters meeting requirements, (2) procurement by local officials of the shelter owner's signature on license agreement, (3) installation of official *Fallout Shelter* signs by the Army Corps of Engineers or the Navy Bureau of Yards and Docks. Shelter signs are also posted on the outside of the shelter facility and the inside access routes leading to it. When required, local officials obtain additional shelter signs from their OCD Regional Office through their State Civil Defense Director.



Figure 3.—Standard fallout shelter sign.

## Shelter Stocking

Shelters must be stocked with supplies ready for use from the moment they are placed in the shelter. This required identification, development, selection and procurement of essential survival items for the shelters developed in the National Shelter Survey.

Essential items are: A basic food ration, water containers, sanitation kits, medical kits and radiological kits.

The Federal Government develops, procures and distributes survival items to local governments at the lowest possible cost. Local governments requisition the provisions, place them in licensed shelters and assure their security, maintenance, and availability for emergency use.

All provisions are expected to be usable for at least five years and are considered adequate to sustain life and maintain occupants in condition to resume an active and productive life upon emergence. Supplementary provisions, to improve the comfort of shelter occupants may be supplied locally if local officials so desire.

*Water.*—Emergency drinking water is the essential item. With water alone, life can be preserved for days without permanent physiological damage.

In selecting a method for long-term storage of water, the Office of Civil Defense devised a system that obviated transporting hundreds of thousands of tons of water all over the country to depots from which local governments would have to move the packaged water into shelters. Water is stored in containers filled at the shelter site from sources meeting Public Health Service standards. The container, when emptied, can then be used as a receptacle for human waste.

The containers are lightweight metal drums having a double polyethylene liner. (See fig. 4.) Each will hold  $17\frac{1}{2}$  gallons of water for every five shelter spaces. Tests by the U.S. Public Health Service, National Academy of Sciences, National Research Council, and the Food and Drug Administration indicate that water can be safely stored in these containers. Other tests indicated that they are reliable for long-term storage.

Fiscal year 1962 procurement of water containers was sufficient for approximately 41 million shelter spaces. Deliveries will begin in September 1962 and continue through February 1963.

*Food.*—Food supplies for public fallout shelters is a problem that has long occupied civil defense. In 1958, the Office of Civil and Defense Mobilization established an interdepartmental Advisory Group on Research and Development for Food for Shelters. This group established criteria for shelter rations.

Three basic rations have been developed which meet these criteria. The U.S. Department of Agriculture developed a special wheat base ration (bulgur wafer). The National Biscuit Co. developed a wheat

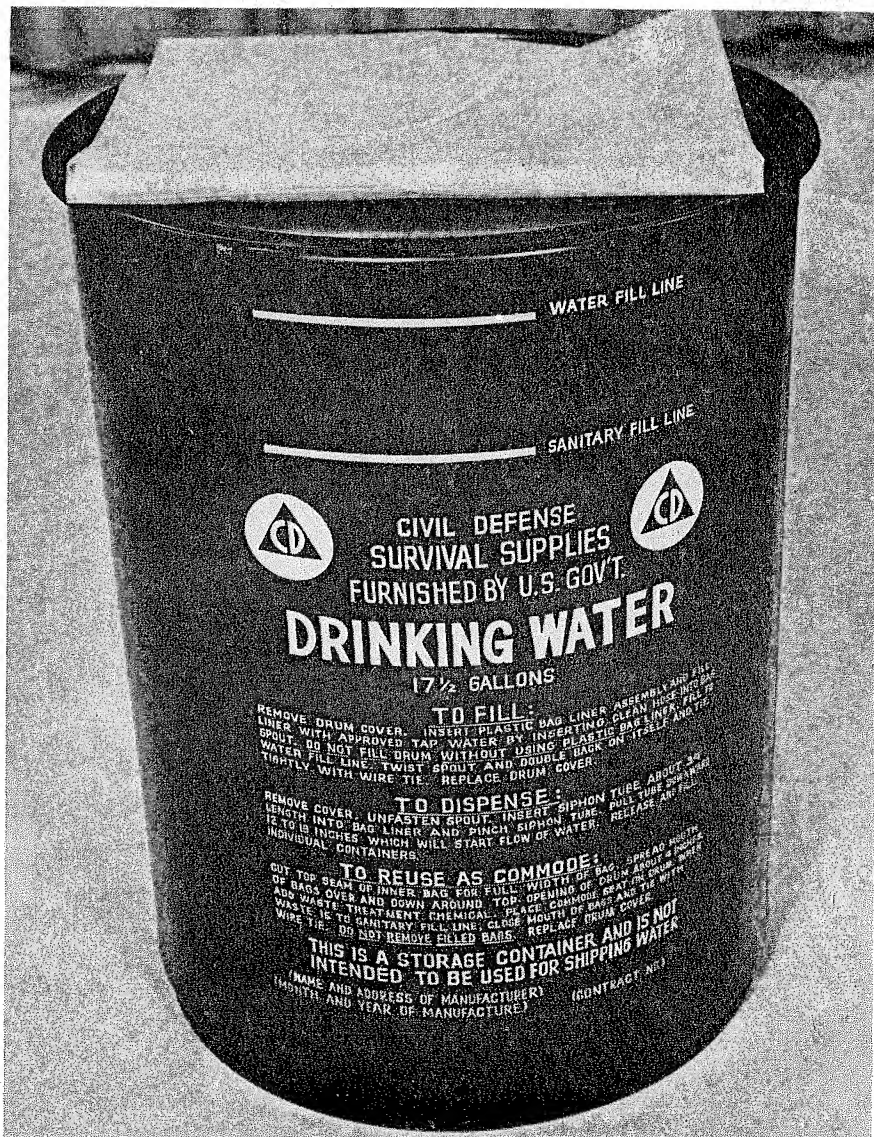


Figure 4.—Community fallout shelter water storage container.

flour based biscuit for the New York State Civil Defense Commission, and the Midwest Research Institute developed a wheat-corn-flour cracker for the State of Nebraska.

The basic ration is 10,000 calories per shelter space. The ration contains minimum amounts of protein since water will be rationed in shelters and high protein foods are harmful when consumed for long periods with limited quantities of water. The ration provides daily calories adequate for sedentary conditions. Except in small areas of intense radiation, shelterees will be able to augment the basic ration with food from nearby sources.

The bulgur wafer appears to be most promising of the rations but full production capacity is not yet available. Advantages of the bulgur wafer are: 50 percent less storage space is needed than for flour-based foods, and it has greater shelf life and more flexible use. The wafer is especially adaptable for use with supplemental rations which could be provided by local governments. All three rations can be eaten dry, but the bulgur wafer may be crumbled and eaten with milk and sugar, served with a hot sauce such as chili or spaghetti sauce, or added to soup, like barley or rice. As a soft gruel, it is suitable for children and aged persons.

Procurement contracts were awarded during fiscal year 1962 for approximately 188 million pounds of shelter rations, an amount sufficient for more than 37 million shelter spaces. (See fig. 5.) Deliveries for the entire amount will be completed by the end of calendar year 1962. A production test contract for 0.5 million pounds of bulgur wafers was also let. This contract will determine the feasibility of low cost expanded mass production techniques with processing equipment developed or modified for this purpose. Test results are expected to be available in December 1962.

*Sanitation kit.*—The shelter sanitation kit is designed primarily for waste disposal during shelter occupancy. Toilet facilities, adequate to meet the needs of 50 or more persons may not be available in the shelter, or if available, may not be operating.

The kit was developed in early 1962. (See fig. 6.) It consists of a 17½-gallon fiber drum with a polyethylene liner. The water containers, when emptied, will serve as additional waste containers. Packed in each drum are a toilet seat, toilet paper, aseptic chemicals, sanitary napkins, a waterless hand cleaner, plastic drinking cups for individual use, and other items. The kits come in two sizes, one to serve 25, the other, 50 persons.

Field tests in January 1962, supervised by the U.S. Public Health Service, proved this method of waste disposal satisfactory.

Sanitation kits will be assembled by seven workshops for the blind throughout the country. In early 1962, assembly of these kits was

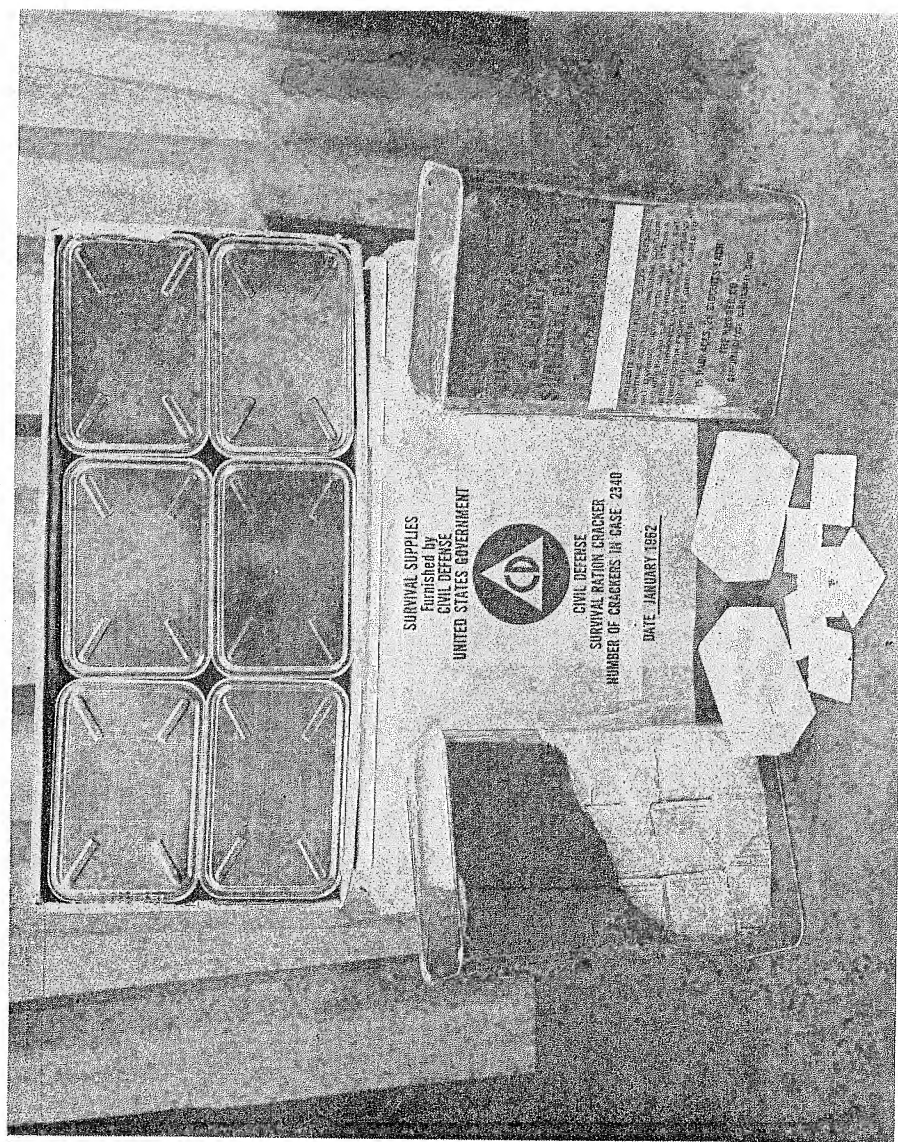


Figure 5 — Communitarian Action

Figure 5.—Community shelter survival rations.



Figure 6.—Community shelter sanitation kit SK-4 (designed to serve 50 persons).

placed on the schedule of Blind Made Products by the President's Committee under the terms of the Wagner O'Day Act of June 25, 1938 (52 Stat. 1196; 41 U.S.C. 46-48). The National Industries for the Blind has selected the workshops able to assemble the kits and will procure individual items for all of the workshops.

Fiscal year 1962 funds were used for procurement of sanitation kits adequate for more than 46 million shelter spaces. Delivery will begin in October 1962 and continue through March 1963.

*Medical kit.*—Numerous medical problems are expected to develop during shelter occupancy. The sex, age, status of health, proficiency in skills or professional abilities of occupants can only be loosely estimated. Items were selected for the medical kit that will provide an austere capability to save lives and alleviate suffering by: (1) Preventing disease and checking its transmission, (2) controlling emotional stress, and (3) treating disease symptoms to alleviate suffering and prevent complications. Medication and devices will not be furnished that are specifically required for chronic diseases, childbirth, or where a high degree of professional proficiency is required for their use.

The Office of Civil Defense selected items for the medical kit with the Family Guide Emergency Health Care as a basic guide. This publication was issued jointly by the Department of Defense and Department of Health, Education, and Welfare in November 1961. The Committee on Disaster Medical Care of the Council of National Security, American Medical Association, reviewed the material and made valuable contributions to the text. All items in the medical kit were approved by the U.S. Public Health Service, Division of Health Mobilization, on March 20, 1962.

The medical kits are of two sizes, one to serve 50-65 persons; the other, 300-325. (See figs. 7 and 8.) They contain identical items.

Fiscal year 1962 funds were used to procure 265,000 medical kits, sufficient to serve approximately 37 million shelter spaces. Deliveries will be 70 percent complete by December 1962, and the remaining 30 percent will be delivered by February 1963.

*Radiological kit.*—Some of the official monitoring and reporting stations (see Monitoring and Reporting, Radiological Defense, in Part IV) may be located in Government-approved community shelters licensed under this program, which provide adequate communications and geographic coverage. However, shelter radiological monitoring may be necessary when operational monitors with their instruments would be participating in field operations away from the shelter. Consequently, these shelters will be furnished with radiation shelter kits (see fig. 9) and monitors trained to use them. Distribution of kits to approximately 200,000 shelters is planned for fiscal year 1963.

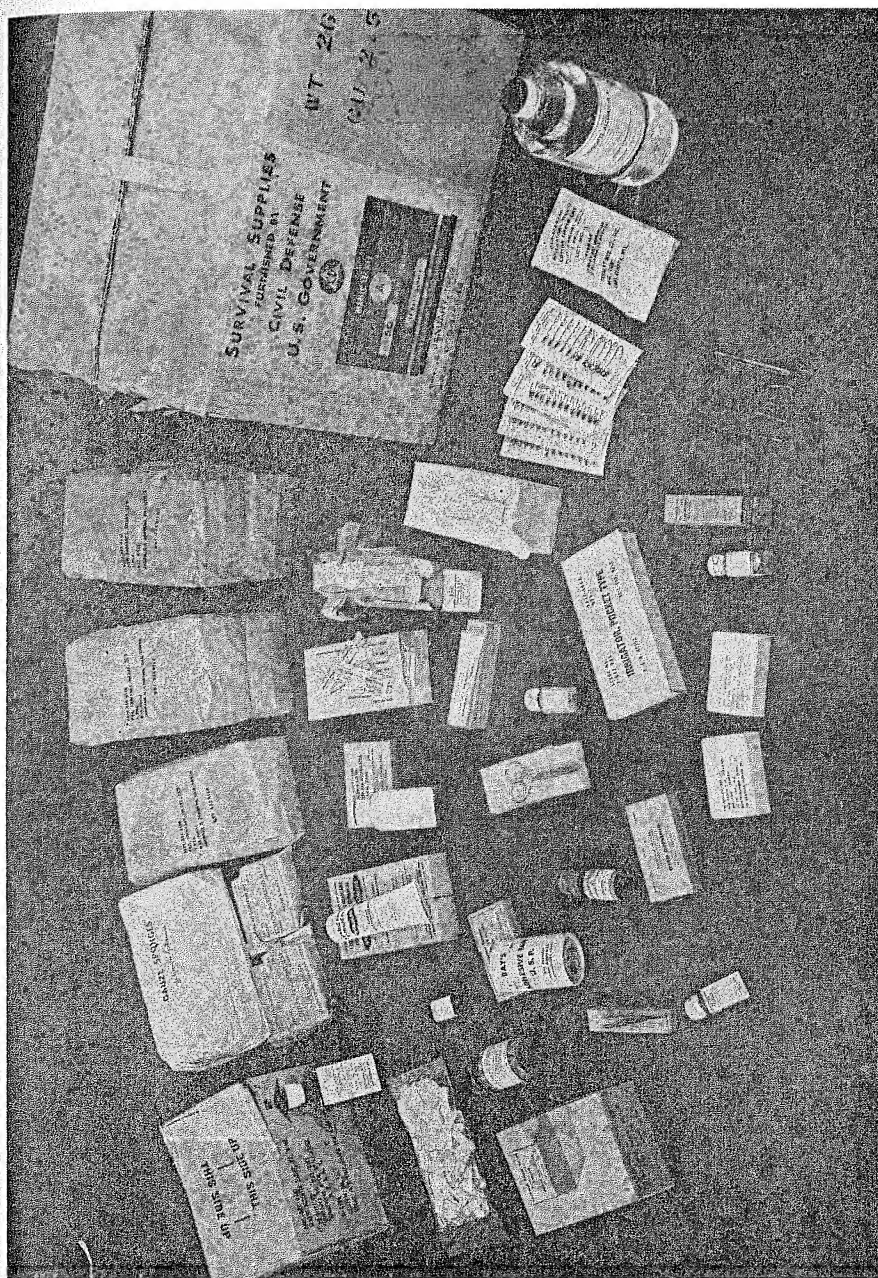


Figure 7.—Community shelter medical kit A (designed to serve 50–65 persons).



Figure 8.—Community shelter medical kit C (designed to serve 300–325 persons).

Radiation shelter kits will contain: A low-range beta-gamma discriminating survey meter (CD V-700) for monitoring food, water, and personnel, a high-range survey meter (CD V-715) for monitoring inside and outside the shelter, two dosimeters to measure personnel exposure, and a dosimeter charger.

*Logistics.*—Shelter supplies are procured through various subsidiary centers of the Defense Supply Agency. They flow from the manufacturer or kit assembly points to warehouses provided and controlled by the Federal Government for distribution to local governments. Federal warehouses in or near heavily populated areas will be utilized, the geographic distribution of shelter spaces governing the location. Federally-owned warehouses have space adequate to handle stocking.

Rail and motor vehicle transportation will be used to transport supplies from manufacturers or kit assembly points to the Federal warehouses, the Federal Government bearing the cost of transportation. Distribution from warehouses to local governments will generally be by motor vehicle. Normally, local governments will provide transportation for pickup and delivery of supplies to shelters if the warehouse is not more than 25 miles from them. Where pickup is not feasible for the local government because of distance, the Federal Government will pay for transportation to a pickup point or to shelters. It is estimated that 85 percent of the supplies will be picked up within the 25-mile radius with a balance of only 15 percent to be delivered via second destination shipping.

*Operational status.*—Shelter provisioning in fiscal year 1962 was mainly concerned with establishing requirements, preparing specifications, and developing procedures for procurement, transportation, warehousing, and transfer of title of supplies to local governments. Local responsibility for shelter stocks was defined and a test of a tentative supply system conducted in 14 cities. Procurement of about 60 percent of the provisions needed for surveyed shelter space was initiated at a cost of approximately \$2.07 per space.

Operations beyond fiscal year 1962 will depend upon available funds. However, tentative plans are to complete stocking the shelters located in the initial phases of this program.

Investigation will continue to determine the cost, feasibility, and need of providing special shelter rations for infants, persons requiring special diets, aged persons, and others with special health requirements. Other studies will mainly concern packaging, which amounts to 40 percent of the cost of shelter provisioning. This high percentage is due largely to the packaging needed to assure 5-year shelf life for supplies.

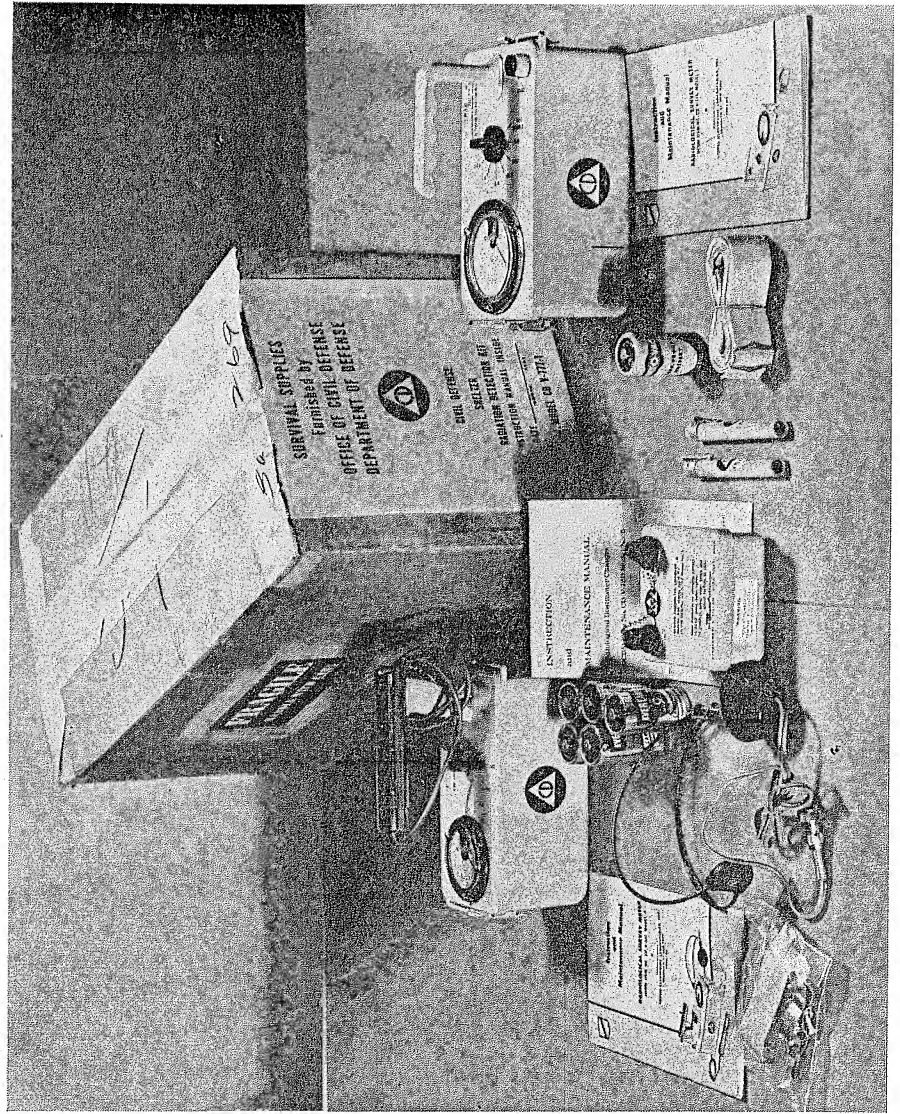


Figure 9.—Community shelter radiation kit: CD V-777-1

## SHELTERS IN FEDERAL BUILDINGS

In addition to providing more shelters, Federal shelter construction is indispensable for stimulating State, local government, and private investment in shelters. Since fiscal year 1960, a directive to Federal departments and agencies has required them to include fall-out shelter design and construction costs in their budget estimates for appropriate new Federal buildings. Shelter construction in existing Federal buildings was also encouraged.

The \$17.5 million made available from the civil defense appropriation contained in the Department of Defense Appropriation Act, 1962, was the first significant fund available for the incorporation of shelters in new and existing Federal buildings. The 701 projects planned during fiscal year 1962 will add more than 500,000 spaces to the nationwide shelter inventory at an average cost of less than \$32 per space. Most of the funds were allotted to construction projects under cognizance of General Services Administration. Other participants were the Veterans Administration, Tennessee Valley Authority, the Panama Canal Company, and the Departments of Agriculture and the Interior.

## SHELTER SUPPORT PROGRAMS AND ACTIVITIES

### Protective Structures

*Emergency operating centers.*—Protected sites for governments at all levels would be necessary for civil defense emergency operations after attack. To assure continuity of OCD emergency operations protected control centers for OCD regional offices have been planned. At the end of fiscal year 1962, construction of the first center, located in OCD Region 5 at Denton, Tex., was 30 percent complete, and completion was scheduled for March 1963. Funds appropriated in fiscal year 1962 will be used for constructing the second center, to be located in OCD Region 1. Funds for constructing protected control centers for each of the other six OCD regional offices will be included in future budget requests.

Planning and construction of protected emergency operating centers for State and local governments were accelerated by the use of Federal funds. (See Federal Assistance, Part V.) Twenty-eight such centers (7 State, 12 county, and 9 city) were complete at the end of fiscal year 1962. In addition, 25 centers were under construction and 42 were being planned.

Under consideration at the end of the year were proposals to extend Federal assistance to attain two additional types of protected facilities for local governments to provide for (1) control of emergency operations of limited geographical sectors containing a concentration of

shelters and people and (2) operational capability of essential facilities, such as water and power utilities, which may need to be operated in a radioactive fallout environment after enemy attack.

*Prototype shelters.*—Initiated in fiscal year 1960 to provide public demonstration models and to stimulate shelter construction, these shelters will eventually add about 50,000 spaces to the nationwide shelter inventory. This program has contributed valuable information for shelter construction and has created national and international interest in shelters.

Although the construction phase of the program was nearing completion by the end of fiscal year 1962, the Government may retain rights to these facilities for demonstration purposes for periods up to five years. Allocated to this program were \$2.5 million from fiscal year 1960 and \$1,792,400 from fiscal year 1961 appropriations. Of 658 prototype shelters approved for construction at the end of this fiscal year, 611 were completed, and 47 were being designed or constructed.

*Family shelter design and evaluation.*—Special attention was given, during fiscal year 1962, to protect family shelter purchasers and ethical business dealers from fly-by-night operators in the sale of shelter-building schemes and expensive or useless gadgets. The OCD and the Federal Trade Commission, in cooperation with the Federal Housing Administration and other agencies, took concerted action to encourage high quality standards among family shelter dealers and to eliminate deceptive shelter advertising.

New procedures for submittal of shelter designs to OCD for evaluation were devised to help protect family shelter purchasers. In December 1961, the OCD issued Technical Memoranda 61-1, Minimum Technical Requirements for Family Shelters, and 61-2, Information on the Submission of Shelter Designs for Review by the Office of Civil Defense. All shelter designs (about 1,000) on file with OCD were returned to their owners with copies of these memoranda and an explanatory letter. The new procedures were fully implemented in about one month.

In addition to evaluating proprietary designs, OCD has produced a series of designs ranging from inexpensive do-it-yourself basement shelters to larger shelters having dual-purpose use. The first eight designs of this series were issued in OCD publication H-7, Family Shelter Designs. Additional family shelter designs being prepared for publication will include both blast-resistant and fallout shelters.

*Protective Structures Development Center.*—Initiated during fiscal year 1962 at Fort Belvoir, Va., and scheduled for opening in December 1962, the Protective Structures Development Center is designed for developing, testing, and evaluating design and construction of

protective structures and associated equipment. It includes an area where manufacturers can erect shelter structures or components and provides facilities for experimental work in radiation shielding. In addition, technical information on protective structures and associated equipment will be made available to authorized research and development groups.

*Protection of radio stations.*—A fallout shelter program for selected radio stations was started in fiscal year 1962. The purpose of this program is to enable these stations to operate in a radioactive fallout environment in disseminating official information during a postattack period. A total of 170 participating stations were offered Federal funds upon agreement to build a suitable shelter for continuous emergency broadcasting. In addition, each station must agree to provide equipment for this type of broadcasting at its own expense. A total of 75 stations signed such agreements during fiscal year 1962, and the cost of the program was \$278,087 including administrative expenses.

*Engineering case studies.*—Development of the nationwide shelter program has resulted in need for widespread publication and distribution of technical information on shelter engineering design. This information primarily concerns the relationship between engineering designs and varying conditions prevailing in different geographical areas; e.g., variations in soil, climate, construction methods and costs, and building codes. To apply shelter engineering designs suitable to these conditions, case studies were started of several types of structures offering major sources of future shelter.

At the end of the fiscal year, contracts totaling approximately \$800,000 and covering 158 widely dispersed projects (107 schools, 39 hospitals, and 12 commercial facilities) had been awarded. Plans were made to publish the results of these studies for the information of property owners, engineers, and architects.

*Advisory service.*—A professional advisory service was established to provide highly specialized assistance to qualified architects, engineers, and other professional personnel engaged in protective design and construction. This service is rendered principally by two methods: (1) Direct consultation and (2) technical publications.

During fiscal year 1962, several hundred architectural and engineering firms, engaged in designing shelters for schools and other buildings, consulted the OCD professional staff. These consultations were conducted at headquarters and regional offices in several ways; e.g., by telephone, correspondence, or personal visit.

A comprehensive series of technical publications on protective structures and related equipment was in preparation at the end of the fiscal year. Prepared either by OCD staff or outstanding authorities under contract, these publications are examined by recognized experts

and present the best information currently available. In addition to specialists of Federal agencies and the Military Establishment, the OCD staff works with the National Academy of Sciences, American Institute of Architects, American Society of Civil Engineers, and the Building Officials Conference of America in developing these publications. The series includes:

1. Professional manuals containing detailed technical information on fundamental principles of designing protective structures.
2. Professional guides containing general technical information for planning and designing shelters in major types of buildings such as schools, hospitals, churches, and apartment houses.
3. Design studies giving definitive plans and construction details for general types of dual-purpose shelters.
4. Technical memoranda covering technical requirements and related information requiring only a brief presentation.

### **Professional Development of Architects and Engineers**

The primary and immediate objective of this program during fiscal year 1962 was to qualify architects and engineers to help identify existing fallout shelter. (See Fallout Shelter Survey.) The ultimate objective is to develop the professional capability of the Nation's architects and engineers to plan and design protective structures. Members of these professions have great influence on building committees, property owners, and other persons initiating construction projects. The capability of architects and engineers in shelter designing, therefore, will be a future determining factor for including shelter construction in many new buildings. To assure this capability, knowledge gleaned from research, development, and testing is transmitted to selected faculty members of schools of architecture and engineering, who are encouraged to share their knowledge with their students and with active members of their profession by means of professional development programs.

A Civil Defense Advisory Committee on the Design and Construction of Public Fallout Shelters was established in April 1962. (See Advisory Committees in Part VII and Appendix 4.) Under OCD chairmanship, the Committee acted in an advisory capacity on many shelter problems and was especially active in developing recommendations on the role of architects and engineers in civil defense and on the proposed shelter incentives program.

*Fallout Shelter Analysis Courses.*—Based on OCDM experience in conducting a two-week course in February 1961, and sponsoring an eight-week professional development program at Pennsylvania State University in July 1961, a four-week pilot course was conducted during August 1961. This course was held at the U.S. Army Engineer School, (USAES) Fort Belvoir, Va., for selected engineering person-

nel of the Army Corps of Engineers and the Navy Bureau of Yards and Docks. This nucleus trained other Government personnel in shelter analysis and evaluation sufficiently to start preliminary administrative actions required by the Government and its contractors to prepare for the shelter survey.

With the cooperation of about 30 engineering and architecture professors who had participated in one of the OCDM programs and the experience gained from the USAES 4-week course, OCD arranged for 2-week successive courses at the U.S. Army Engineer School, the U.S. Navy School for Civil Engineer Corps Officers, Worcester Polytechnic Institute, Oklahoma State University, and the Universities of California, Colorado, Florida, Illinois, Michigan, and Washington. The continued flow of graduates from these schools provided the highly specialized and qualified architectural and engineering manpower needed by architect-engineer firms to carry out the fallout shelter survey. Approximately 2,500 qualified graduates were made available nationally at the end of the fiscal year. Cost of the course to the Government was about \$284,000 or \$110 per qualified student. About 84 percent who took the course qualified.

Although the initial purpose of the course was to train supervisory personnel of firms expected to receive survey contracts, representatives of Federal agencies, military services, and State and local governments were later invited to attend. The emphasis in the course was gradually shifted from shelter analysis to planning and designing shelter areas in new construction.

Beginning in June 1962, the course was started at George Washington University, Washington, D.C., to meet continued demand during the summer. Completion of 4 successive offerings of the course during the summer brought the number of architects and engineers especially qualified in fallout shelter design and analysis to a total of approximately 2,600. Courses will be resumed at the other participating schools as required to meet the demand.

*Curricula development.*—A contract was negotiated with the University of Wisconsin to develop a correspondence course on fallout shelter analysis. At the end of fiscal year 1962, instructors were being qualified to begin work on the project.

Purdue University contracted to develop engineering curricular materials on shelter requirements to be used by schools of mechanical engineering for teaching graduates and undergraduates shelter design techniques. The contract also provided for development of unique mechanical systems, preferably using standard equipment, to supply the essentials for sustaining life in shelters when available resources, such as power and water may be restricted. Work under the contract was scheduled to begin early in fiscal year 1963.

*Faculty development.*—OCD summer institutes in protective construction were conducted at Worcester Polytechnic Institute and the Universities of California, Colorado, and Illinois. Approximately 68 representatives from all parts of the Nation including Alaska, Hawaii, 50 universities, government agencies, and several private firms attended. These institutes qualify additional faculty members of architectural and engineering schools to teach the two-week fallout shelter analysis course, and to assist them in developing curricular material for use at their own schools.

A special summer institute in fundamental radiation shielding problems was conducted at Kansas State University. OCD constructed a fallout simulator near the campus and assembled other radiological equipment. Among twenty participants were representatives from England, Norway, Sweden, and West Germany.

*Technical information and design competition.*—At the end of the fiscal year, the compilation of a new textbook for use in shelter analysis courses was in process under OCD direction. Prepared at the U.S. Army Engineer School with editorial and other assistance from cooperating universities, the book will combine applicable portions of many books previously used and will be the first in a series on the subject of protective structures.

All architects and engineers who have attended OCD sponsored shelter design and analysis courses are periodically mailed pertinent information and publications as new material becomes available. This service provides a continuing means of developing and maintaining professional competence in the field of shelter design.

A contract was negotiated with the American Institute of Architects to administer competition among the Nation's architects and engineers for producing school shelter designs. The purpose of the contest is twofold: To obtain, in the most practical manner, top quality designs from leading architects and engineers and to stimulate professional interest in designing protective structures. These designs will be used by the Government for demonstrating to professional architects, engineers, and educators what can be done to produce dual-purpose school shelters which are flexible, attractive, and functional.

At the end of the fiscal year, more than 600 design teams had entered the competition, indicating widespread interest in the project. Three nationally known architects, a mechanical engineer, and the Deputy Assistant Secretary of Defense (Civil Defense) will select the winners. The cost of the project totaled \$93,500, including \$55,000 in prizes. First, second, and third prizes will be awarded in each OCD region and one of the first prize regional winners will be selected for the national grand prize.

## **PART IV**

### **COMPLEMENTARY CIVIL DEFENSE SYSTEMS**

In addition to the nationwide fallout shelter system, complementary civil defense systems are necessary to achieve a balanced civil defense program. Generally, these systems are essential for effective use of shelters and for preattack planning and postattack operations. The systems are: Attack Warning, Communications, Monitoring and Reporting, and Damage Assessment. Specific purposes of each system are explained in applicable sections of this part of the report.

#### **ATTACK WARNING SYSTEM**

The Attack Warning System (AWS), the overall system for warning the civilian population, consists of Federal, State, and local parts. (See fig. 10.)

##### **National Warning System**

The Federal part is the National Warning System (NAWAS) which is kept in operational readiness at all times. NAWAS is a leased communications system interconnecting 7 OCD Warning Centers, located at major North American Air Defense Command (NORAD) installations, with 46 Federal Warning Points and 454 other warning points strategically located throughout the continental United States. This network of approximately 45,000 miles of circuits is a special voice communications system over which direct warnings can be sent simultaneously to the total 500 warning points from any of the OCD Warning Centers.

During fiscal year 1962, improvements were made in warning capabilities. Of the 500 NAWAS Warning Points, 51 were added during the year. The warning circuits were rearranged so that service interruption at one point would not affect service at other points on the circuit. The U.S. Army Corps of Engineers began a survey of all NAWAS Warning Points to determine available fallout protection and additional fallout protection necessary for continued operation after attack. In addition, Federal funds were used to strengthen the Washington Metropolitan Warning System by installing 20 new sirens to serve recently populated areas.

OCD provides warning information to Federal agencies which request this service and install and maintain warning systems. In addition to its warning function, NAWAS is used for disseminating other emergency information; e.g., warning of severe weather, fire, or seismic seawaves, and assisting the U.S. Air Force in search and

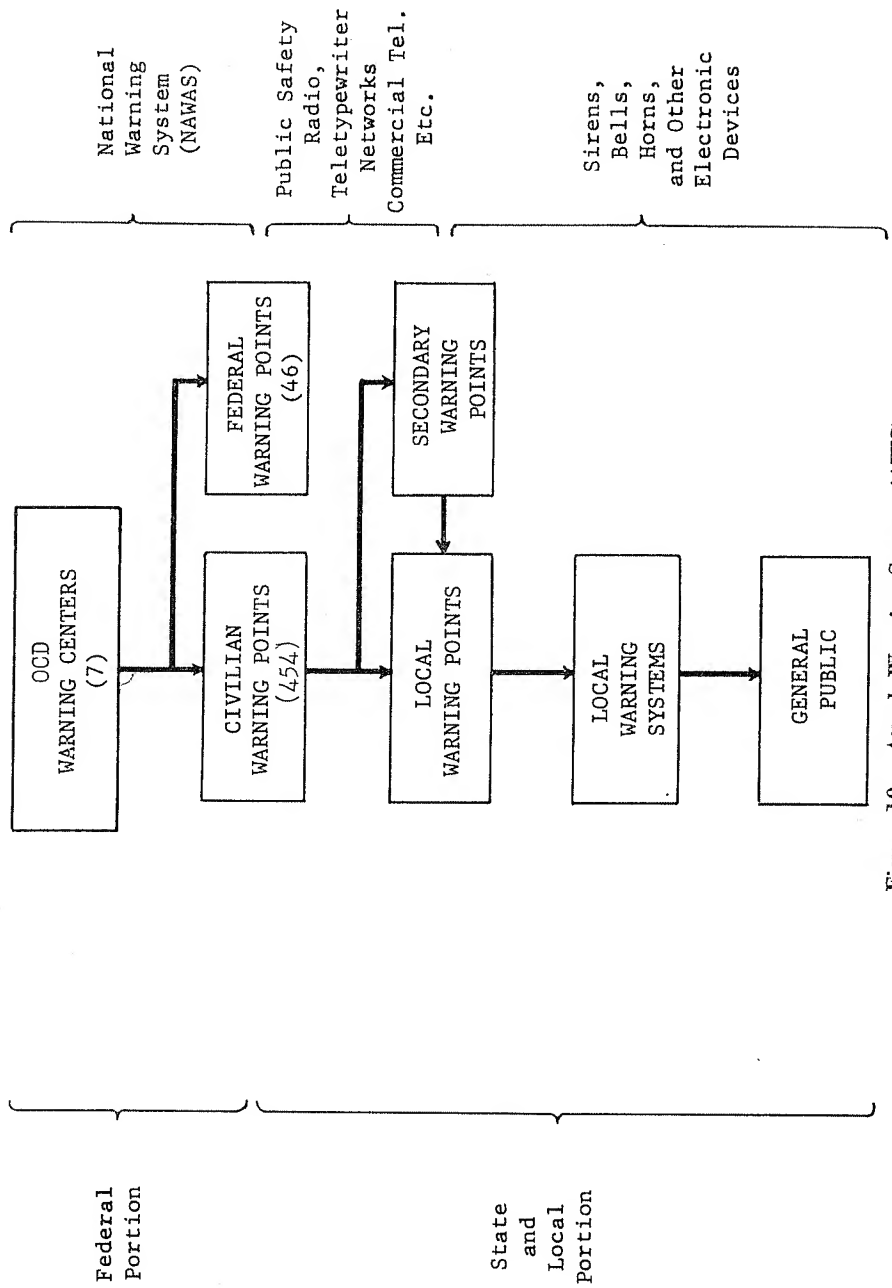


Figure 10.—Attack Warning System (AWS)

rescue missions for aircraft reported missing. Among Federal agencies served by NAWAS are the U.S. Army Command Headquarters, U.S. Coast Guard installations, Atomic Energy Commission, Tennessee Valley Authority, General Services Administration, the Office of Emergency Planning, and the Department of Health, Education, and Welfare.

### State and Local Warning Systems

The State part of AWS relies upon various means to send warnings and supplemental information from NAWAS to several thousand local warning points. OCD provides Federal matching funds to States for establishing, improving, and maintaining their warning systems. The local part of AWS is used to warn the public. Federal matching funds are also used for this purpose. Based on continued study of State warning plans and systems, OCD has helped States to expand their warning systems to their political subdivisions. Consequently, rapid warning is possible in many communities not previously linked to AWS. Warning devices purchased with Federal matching funds by small communities have increased local warning capability.

Local warning systems use both outdoor and indoor warning devices to alert the public. Sirens and voice sound units are widely used for outdoor warning, and several methods are available for indoor warning; e.g., telephone, radio and other electronic devices. However, an effective means of warning all persons indoors will be available when the National Emergency Alarm Repeater (NEAR) system becomes operational.

### National Emergency Alarm Repeater System

Previously tested and demonstrated, the NEAR system is designed to give almost instantaneous indoor warning where outdoor warning systems are inadequate. A technical problem in the use of the NEAR system became apparent in fiscal year 1962 because its operation depended upon transmitting a special power pulse (240-cycle signal) over utility lines. Silicon control rectifiers, increasingly used in home appliances, were found capable of interfering with the 240-cycle signal used to activate the NEAR receiver.

The planned solution to the problem is to use a 255-cycle signal to operate the NEAR system in lieu of the 240-cycle signal. Consequently, prototype installation of new NEAR generators on 8 utility company systems was planned to test the use of a 255-cycle signal for activating NEAR receivers. A recently established Industry Advisory Committee (see Appendix 5) helped OCD select the 8 test sites. On the committee were representatives of private, public, and rural electrification utilities.

OCD has encouraged industry to develop manufacturing potential for producing a reliable and economical NEAR receiver. At the end

of fiscal year 1962, OCD was exploring the installation and operating problems of the NEAR system with individual utility companies.

## COMMUNICATIONS

### Basic System

The basic means of operational communications for the Office of Civil Defense is the National Communications System No. 1 (NACOM 1). (See fig. 11.) The system is specifically designed for the speed, flexibility, and continuity of service required in civil defense emergency operations. It consists of leased telephone and teletypewriter services connecting OCD, its Regional Offices, and State civil defense offices. The major function of NACOM 1 is to provide the means of communication necessary for coordinating emergency government operations from the Federal to State levels. Its connections extend to emergency relocation sites of selected Federal agencies, and portions of the system have been modified to accommodate data transmission of the National Resource Evaluation Center (NREC). Normal administrative telephone service is also provided between OCD and its regional offices via NACOM 1.

The portion of the NACOM 1 system connecting OCD and its Regional Offices is operational full-time daily. The portion connecting OCD regional and State Offices can be activated within 1 hour. In addition, each station in the system can provide 24-hour communication via teletypewriter exchange service with any Government or commercial station which maintains similar service.

### Backup System

NACOM 1, which is a wireline system, is backed up by an emergency system, National Communications System No. 2 (NACOM 2). NACOM 2 is a high-frequency radio network using modern single sideband voice transmission and radio teletypewriter methods. Control facilities for stations in this system are located in the area of the NACOM 1 communication center which provides fast routing of messages over either system.

At the end of fiscal year 1962, NACOM 2 was operational at OCD Headquarters and 7 OCD Regional Offices. (See fig. 12 for proposed implementation plan.) Future plans call for extending the network to additional regional and all State installations and Puerto Rico. Eventually, the network is intended to provide for communications with the Panama Canal Zone, American Samoa, and the Virgin Islands.

### Other Activities and New Developments

The Radio Amateur Civil Emergency Services (RACES) continued to expand. Established in 1952, RACES enables amateur radio op-

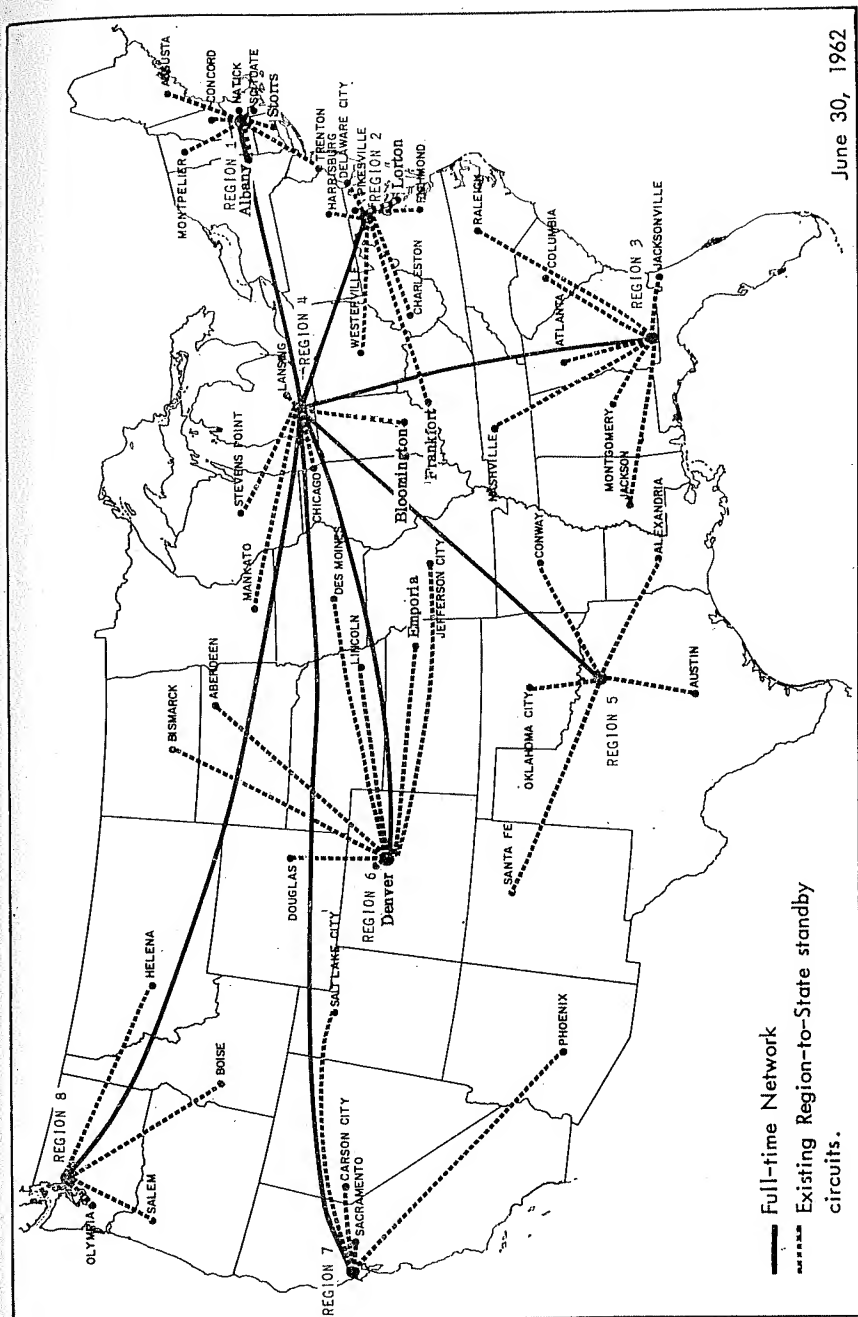
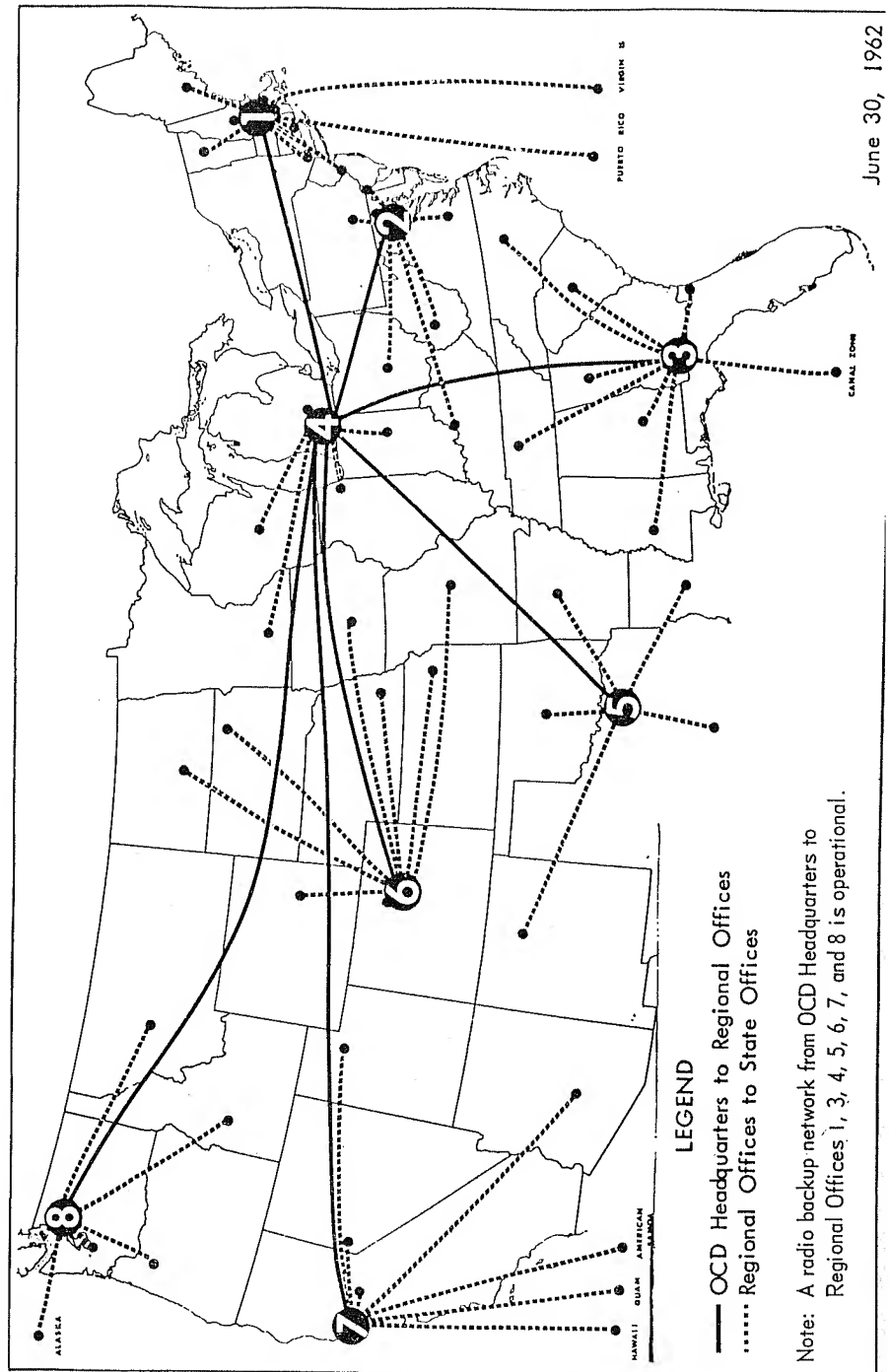


Figure 11.—National Communications System No. 1 (NACOM 1).



erators to supplement State and local communications systems in emergencies. At the end of fiscal year 1962, the RACES program operated in every State and included 35,000 amateur operators and 1,630 OCD approved plans.

Since 1952, Federal matching funds averaging \$5 million annually have been made available to State and local governments for communications facilities. Technical improvements in communications methods and obsolescence of equipment indicate a need for continued expenditure at this annual rate.

Important new developments in civil defense communications during fiscal year 1962 included:

1. Plans and preparations for integrating the civil defense basic and emergency backup communication systems with other communication systems of DOD. This will be accomplished in fiscal year 1963 by placing these systems under the management and direction of the Defense Communications Agency. Greater backup resources for civil defense communications and more economical operations are anticipated from this action.

2. Provision of fallout shelters for selected radio stations to assure operational capability in postattack fallout environment. (See Protection of radio stations, under Protective Structures in Part III.) Part of this program includes provision of standby power generators for emergency use and radio links with civil defense emergency operating centers.

3. Relaxation of CONELRAD (Control of Electromagnetic Radiations). The Department of Defense (DOD) informed the Federal Communications Commission (FCC) on April 23, 1962, that the minimizing of electromagnetic radiation of transmitters was no longer a military requirement. A joint DOD-FCC release the following day stated that relaxation of this requirement will permit more effective Presidential and civil defense communication with the public during emergencies. However, existing CONELRAD procedures will remain in effect temporarily until new rules and regulations have been perfected. OCD will continue to provide guidance to State and local governments for broadcasting of emergency information.

## MONITORING AND REPORTING

### Radiological Defense

An effective and operationally ready radiological defense monitoring and reporting system is required to provide accurate and timely information on the extent, intensity, and duration of radiological hazards that would exist from fallout after a nuclear attack. Without this information, intelligent use of public and home shelters, controlled postattack remedial movement of the population, and effective

decontamination would be seriously hampered during the postattack period. Specifically, the information would be needed to: (1) Warn people of the presence of fallout and advise them on proper countermeasures, (2) provide technical guidance to the Nation's leadership at all government levels, (3) provide guidance for emergency operations, (4) determine amount of contamination of essential industrial and agricultural facilities including land, forests, food, and water resources, and (5) apply effective decontamination procedures.

Key elements of an effective radiological monitoring and reporting system are: (1) Properly maintained and calibrated instruments, (2) monitoring stations having surface, mobile, and aerial monitoring capability, (3) control centers or collection points with facilities to receive, plot, analyze, and evaluate monitors' reports, (4) properly trained monitors and radiological defense officers, and (5) operating and training manuals to assure standardized procedures for the entire Nation. Under the provisions of Executive Order 10952, the Office of Civil Defense during fiscal year 1962 continued to strengthen the Nation's radiological defense monitoring and reporting system.

*Federal network.*—During fiscal year 1962, more than 550 Federal radiological monitoring stations were added, making a total of 3,475 including 4 outside the 50 States. Of this total, 1,070 stations are field facilities of the U.S. Weather Bureau, the Air Force and Navy Weather Services, and the Federal Aviation Agency, which report radiological information directly to OCD via teletype. Via telephone, these stations report this information to local governments within operational proximity. The remaining 2,405 Federal monitoring stations are located at field facilities of the Departments of Agriculture and the Interior. These stations also report radiological data to State and local governments. The Departments of Agriculture and the Interior also use their field facilities to carry out the radiological defense functions assigned to them under Executive Orders 10998 and 10997, respectively.

The Office of Civil Defense has furnished each of the civilian Federal monitoring stations an instrument kit containing 3 survey meters, 2 dosimeters, and a dosimeter charger (see fig. 13) and 2 protective masks. Growth of the Federal monitoring network is shown by fig. 14.

Future plans call for supplementing the Federal network with approximately 800 existing stations of the Department of Defense (DOD). These stations will report directly to OCD over existing DOD communications networks. Plans also call for developing monitoring capability at 1,400 additional Department of Agriculture and about 100 additional Department of the Interior field facilities. The Departments of Agriculture and the Interior have requested instru-

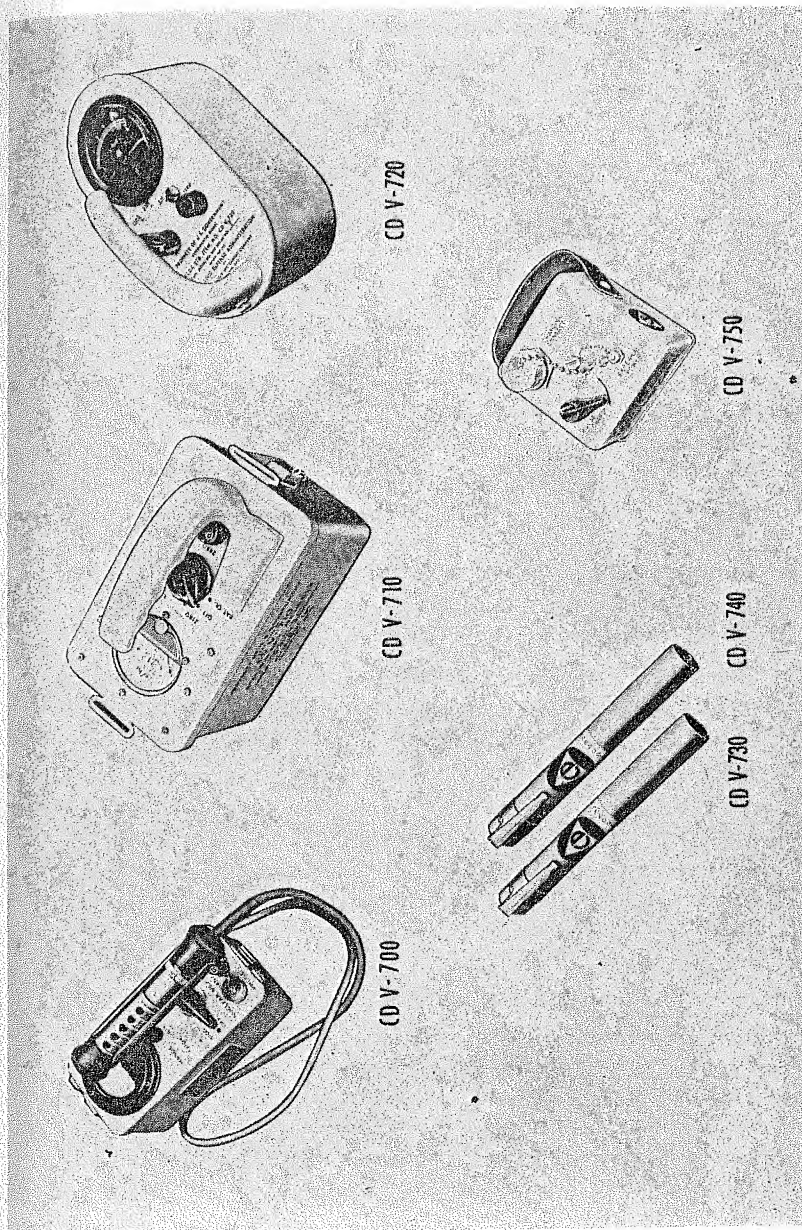


Figure 13 —Radiological defense monitoring kit CD V-777.

- 1 CD V-700 (low range survey meter)
- 1 CD V-710 (medium range survey meter)
- 1 CD V-720 (high range survey meter)
- 1 CD V-730 (dosimeter, 0-20 roentgens)
- 1 CD V-740 (dosimeter, 0-100 roentgens)
- 1 CD V-750 (dosimeter charger)

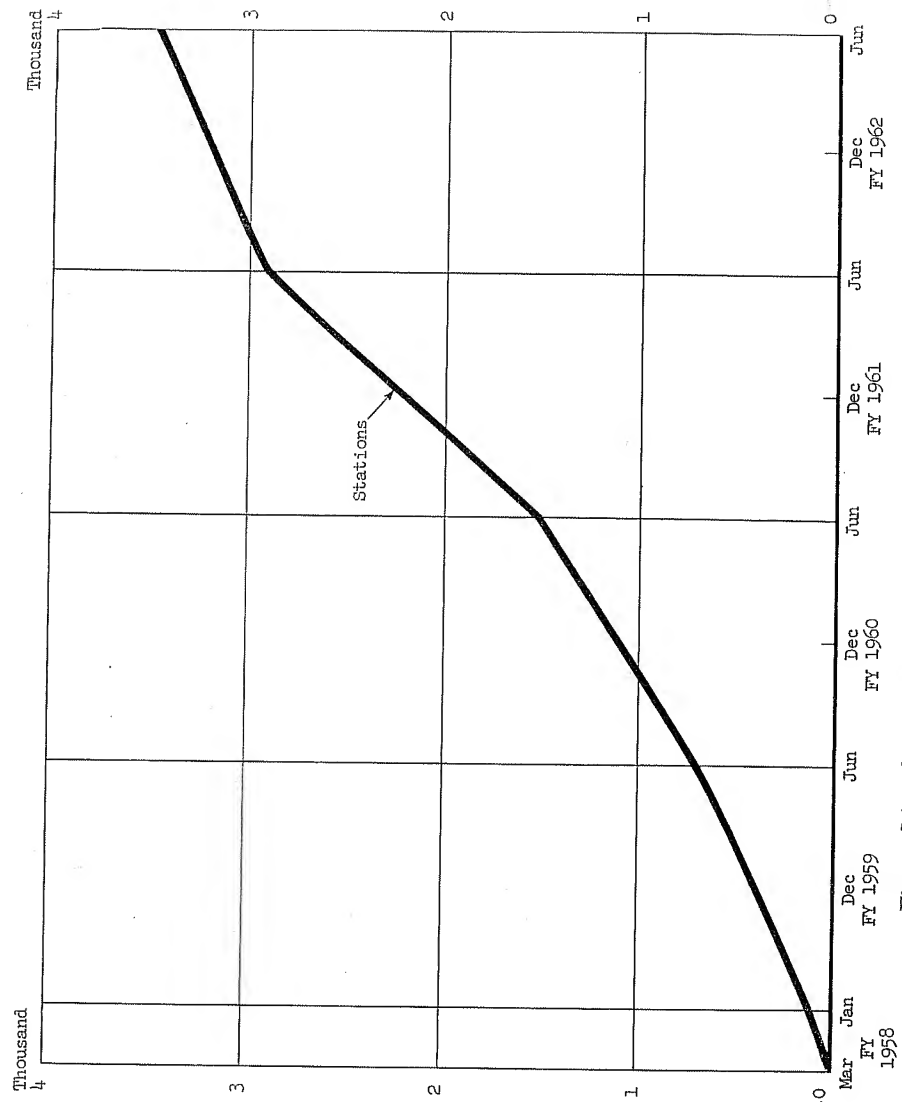


Figure 14 — Growth of Federal Stations

mentation for these additional stations from OCD in support of responsibilities assigned them under Executive Orders 10998 and 10997.

*State and local capability.*—OCD continued to develop a network of State and local monitoring stations mostly among fire, police, health, welfare, sanitation, engineering, and conservation services as well as at public airports having service facilities. At the end of fiscal year 1962, establishment of 27,926 State and local monitoring stations had been approved. (See fig. 15.) Instruments for these stations had been delivered or were being shipped. OCD furnished each State and local station with monitoring instruments identical to those shown in fig. 13, and two protective masks, not shown. Prior to fiscal year 1962, State and local monitoring capability depended upon approximately 170,000 radiological defense items granted by OCD for training purposes and 160,000 similar items granted by OCD to 14,510 high schools for educational purposes. This capability supplements that of existing Federal, State and local operational monitoring stations. However, since these instruments have been used considerably in monitor training, their dependability under prolonged emergency operations is questionable.

OCD therefore will continue to develop operational capability by issuing operational monitoring kits to qualified Federal, State, and local monitoring stations. The objective is to attain 150,000 monitoring stations. However, the instruments in future monitoring kits will be changed. As present supplies of CD V-710 and CD V-720 survey meters become exhausted, they will be replaced in future kits by a CD V-715 gamma survey meter with ranges of 0-0.5, 0-5, 0-50, and 0-500 roentgens per hour. Similarly, CD V-730 and CD V-740 dosimeters will be replaced in future kits by a CD V-742 dosimeter (range 0-200 roentgens).

*Program status.*—The location of most State and local monitoring stations enables instruments furnished by OCD to be used for mobile and aerial monitoring in addition to fixed-station monitoring. Until a special aerial instrument, currently being developed, becomes operationally available, the CD V-710 or CD V-715 survey meters furnished by OCD are satisfactory for this purpose. According to arrangements with the U.S. Air Force, the Civil Air Patrol (CAP) will perform aerial monitoring, and States are currently reaching agreements with the CAP to perform this emergency function. Establishment of aerial monitoring capability at 3,000 public airports is planned for completion by the end of fiscal year 1964. During fiscal year 1962, OCD completed negotiations with the Continental Air Defense Command for permission of civil defense units to perform aerial monitoring if military restrictions specified in the plan for Security Control of Air Traffic and Electromagnetic Radiations (SCATER) should require activation.

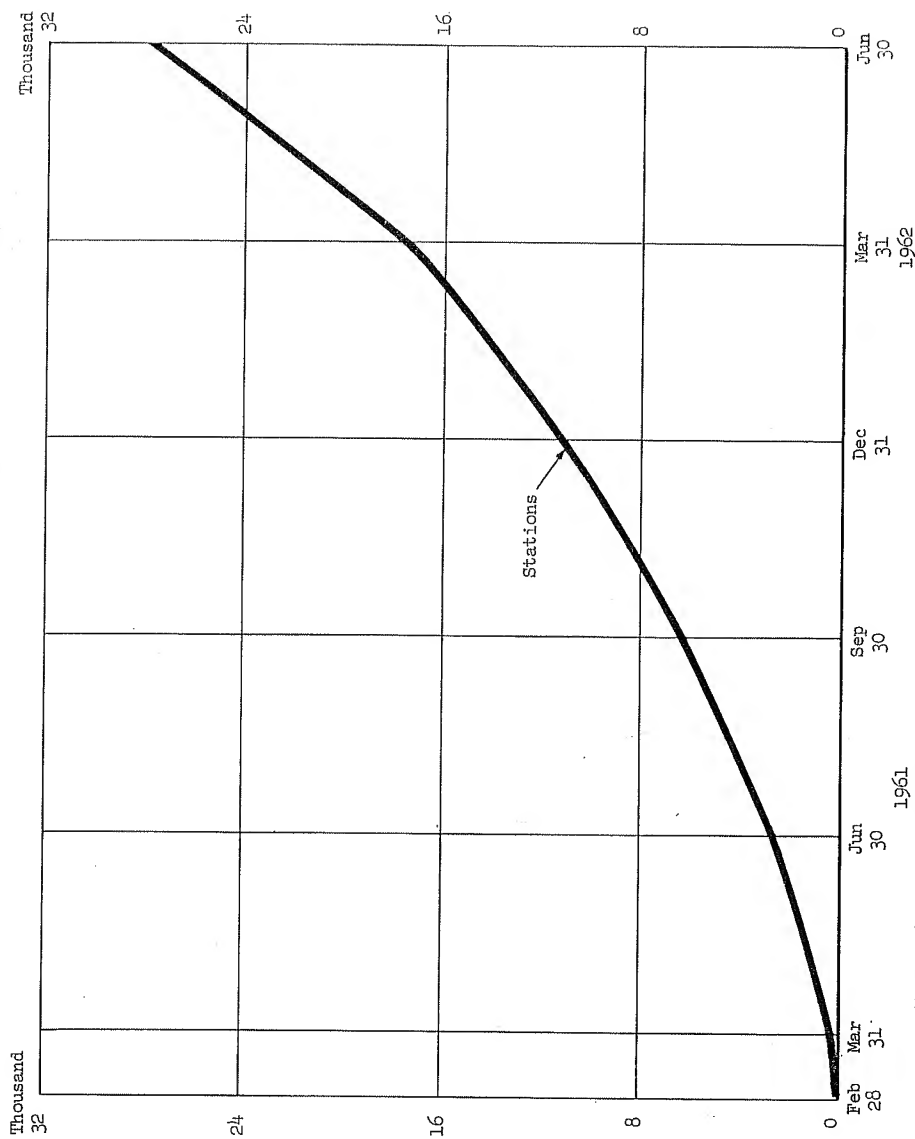


Figure 15.—Growth of State and local radiological fallout monitoring stations.

Fiscal year 1962 contracts totaling approximately \$23.8 million were awarded for the purchase of radiological defense equipment and for a special calibration and maintenance study. The instruments were for monitoring kits being granted to each monitoring station and to local governments for use in licensed public shelters. (See also Shelter Stocking, Part III.) About 3.4 million radiological defense items were procured, including 1 million dosimeters for emergency civil defense workers. (See fig. 16 for cumulative procurement of radiological defense items.)

Approximately 26,000 monitoring kits were approved for grant to Federal, State, and local monitoring stations during fiscal year 1962. (See figures 14 and 15.) At the end of the fiscal year, cumulative distribution of radiological defense instruments was as follows:

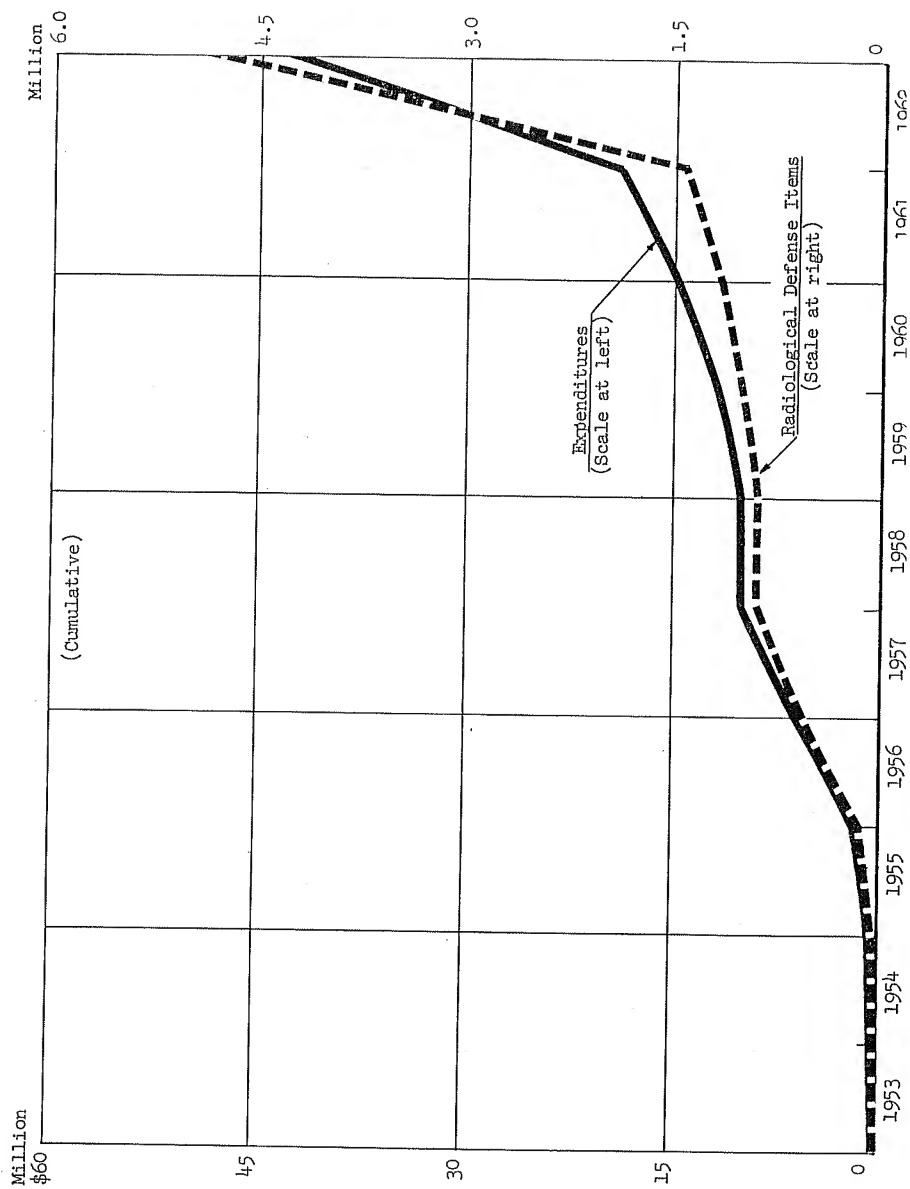
To States for training and operational purposes (requests approved and instruments delivered or being shipped)-----	260, 106
To Federal agencies for training and operational purposes----	108, 100
To a total of 14,510 high schools and colleges for training and education-----	159, 610
To various users for other purposes-----	20, 468
<b>Total instruments-----</b>	<b>548, 284</b>

Fiscal year 1963 plans call for continued procurement of radiological instruments and distribution of monitoring kits to new monitoring and reporting stations, community shelters, and monitoring schools as needed.

In addition to furnishing radiological instruments, OCD assisted States and Federal agencies in maintaining and calibrating the instruments for continuous use. Except for cost of transportation, maintenance and repair service was furnished free to the States and Federal agencies at 12 dispersed maintenance shops operated by General Services Administration for the Department of Defense. To encourage States to establish their own maintenance facilities, OCD offered the following services: (1) Personnel training; (2) supplying of spare parts; (3) matching of Federal funds for batteries, tools, test equipment, salaries of instrument-maintenance personnel, and maintenance by private contractors; and (4) an offer to loan and ship large calibrators to universities assisting in instrument calibration. Seven large calibrators were loaned and shipped during fiscal year 1962. In addition, prototypes of five semiportable calibrators, previously developed by OCD, were tested. Specifications for these calibrators were developed and 95 of them were procured for use by the States.

A recent review of maintenance and calibration activities indicated that all operational survey meters will require recalibration and about 10 percent of them will require maintenance annually. As

1962  
1961  
Figure 15.—Growth of State and local radiological fallout monitoring network.



planned monitoring stations and federally licensed public shelters are stocked with radiological instruments, approximately one million survey meters will require this attention. A study to be continued in fiscal year 1963 will seek the most economical and effective maintenance and calibration method. For additional guidance based on field experience, a contract for \$32,230 was negotiated with the State of California. Information developed in this study will be used to plan and implement a radiological instrument maintenance and calibration program to serve the needs of all government levels.

A radiological defense planning and operational guide was prepared during fiscal year 1962 and publication is planned for fiscal year 1963. This publication will enable State and local governments to develop procedures for postattack operation of a standard radiological monitoring and reporting system.

At least 2 radiological monitors have been trained and assigned emergency operational duties at all Federal, State, and local monitoring stations. To provide for 24-hour daily emergency operations, 2 additional monitors were being trained for each of these stations. Radiological monitors were also being trained for community shelters. Plans call for 3 monitors in each shelter having 50 to 100 spaces and 5 monitors in larger shelters.

Personnel are required to be licensed by the Atomic Energy Commission (AEC) for use of radiation sources obtained from AEC for instrument calibration, training, and other purposes. During fiscal year 1962, OCD processed and forwarded 443 such license applications to AEC for approval. A total of 1,149 licenses in effect were processed by OCD for Federal and local governments.

### Chemical and Biological Defense

Studies conducted for the Office of Civil Defense and others concerned with the threat indicate that chemical agents could be used overtly or covertly against the United States in time of attack. But chemical agents are not considered a major threat since they are effective mainly if used against tactical targets. Studies also indicate that biological agents are a potential threat. Knowledge about practical application of biological agents is insufficient to indicate when, if ever, this threat might become a reality. Used in conjunction with nuclear weapons, chemical and biological agents could produce many additional casualties. Hence, methods of detecting, identifying, reporting, and analyzing chemical and biological agents would be needed.

Executive Order 11001, February 16, 1962, assigned the United States Public Health Service of the Department of Health, Education, and Welfare primary responsibility for developing and coordinating programs for the prevention, detection and identification of human exposure to, or contamination of foods and drugs with, toxic

chemicals or biologicals that might be used in an attack upon the United States. The U.S. Department of Agriculture was assigned similar responsibility in the protection of animals and crops and their products by Executive Order 10998 also dated February 16, 1962. The Office of Civil Defense provides leadership, program guidance, and coordination to these Departments in carrying out these functions.

OCD procured and distributed protective masks to radiological monitoring stations and to State civil defense agencies. At the end of fiscal year 1962, 172,297 masks had been procured. Of these, 139,797 were from military stock and 32,500 from manufacturers. The total number of masks supplied the States for familiarization, demonstration, and emergency use was 70,000 and to radiological monitoring stations, 62,800, at the rate of 2 per station.

Under OCD contract, General Tire and Rubber Company worked on mass production studies for a protective mask for public use. Under the contract, OCD will obtain 25,000 masks for distribution to all government levels for display, training, and operational purposes. Several manufacturers have indicated an interest in producing the mask.

The relative threat posed by biological and toxic chemical agents is being kept under review. If a need for the civilian protective mask is indicated, prospective companies will be encouraged to manufacture it for sale to the general public through normal retail channels at a cost of approximately \$5.00. The mask protects against inhalation of biological, chemical, and radiological agents. Of tough vinyl plastic, it is lightweight, affords good vision and easy breathing, and can be used repeatedly with safety.

Procurement and management of supplies for treating biological and toxic chemical casualties was assigned to DHEW by Executive Order 10958, August 14, 1961.

Other projects in this area, completed or underway, include:

1. Contracting for research on gas and particulate filters for home and group shelter ventilation.
2. Completion of tests of an infant protector by the U.S. Army Chemical Corps. The need for mass production studies will be determined by these tests.
3. Preparation of planning and operational guides for local governments in developing capability to detect and identify biological agents and toxic chemicals and to provide individual and collective countermeasures.

### DAMAGE ASSESSMENT

Damage assessment determines the probable effects of enemy attack upon the human and material resources of the Nation in advance of an attack, and provides guidance for postattack survival operations.

Responsibility for the development of plans and the operation of systems to undertake a nationwide postattack assessment of the nature and extent of damage resulting from enemy attack and the surviving resources, including systems to monitor and report specific hazards resulting from the detonation or use of special weapons, was assigned to the Secretary of Defense by Executive Order 10952. The nine Executive orders issued in February 1962 (see Relationship With Other Federal Agencies in Part II) assigned these departments and agencies responsibilities to maintain a damage assessment capability related to their normal functions, and to provide data to the Department of Defense. The function is to be carried out in consonance with the national defense plans, programs and operations of the Secretary of Defense.

### **Preattack Assessment**

Preattack assessment analyzes the effects of a range of hypothetical attacks which could occur in some specified future time. Data from these studies are used to: Advise industry, Federal, State, and local agencies on the relative vulnerability of proposed relocation or operational sites; study the effectiveness of the shelter program, and furnish a basis for the development of further shelter program proposals; determine the feasibility of evacuation and other civil defense tactics; compute requirements for survival resources after an attack as a basis for remedial action; advise the Department of Health, Education, and Welfare and the Department of Agriculture on the location of civil defense stockpiles; and advise Regional and State Civil Defense Directors on the possible hazards to areas within their jurisdictions.

### **Postattack Assessment**

The extent of damage to human and material resources and the evaluation of remaining resources after an attack would determine the most feasible survival operations at all levels of government, and nationwide action most conducive to recovery.

OCD plans call for postattack damage assessment at OCD regional headquarters and regional, State, and local levels. Much of this would be done by map plotting, graphical, and other manual methods. OCD provides training and reference data for this activity. Damage assessment at regional and lower levels will provide regional, State, and local officials with an independent means of appraising damage in their areas and reduce their need for information from the OCD and the Office of Emergency Planning (OEP) headquarters.

OCD obtains postattack damage assessments from centrally located electronic computers which give high speed estimates of casualties and facility damage. Other programs provide detailed damage and casualty assessment for individual points.

Nuclear detonation reports required for assessments are furnished by the North American Air Defense Command (NORAD). The U.S. Air Force is developing a prototype system for automatic surveillance of nuclear attack detonations (NUDET) which would identify and report the ground zero, weapon yield, and height and time of a nuclear detonation. When perfected, the NUDET system will cover Canada and the United States.

Necessary weather forecasts are furnished by the U.S. Weather Bureau. The so-called "data base" used in the computer assessment process is stored at computer locations on magnetic tapes. Taped data are available for all important categories of resources such as population, railroad facilities, electric generating stations, oil refineries, food processing facilities, and medical manpower.

Tape information includes location of resources, capacity of facilities, a physical vulnerability number for structures indicating resistance to blast, and other required data.

For later stages of postattack damage assessment, aerial reconnaissance will be made by the USAF. Photographs have been taken of all potential targets. After an attack, the USAF would rephotograph the areas of detonation. By superimposing the postattack over the preattack photographs, a photo-interpretation would give the basis for producing damage assessment data. Damage assessments from this source would be far more accurate than initial reports obtained from the computer method and would be substituted therefor.

Final postattack damage assessment is based on data obtained by onsite inspection. Arrangements have been made with the U.S. Census Bureau and the U.S. Department of Agriculture to make such assessments. Plans call for including other Federal agencies and local government agencies in this service as the program is developed further.

### **Data Base Improvements**

Vulnerability analysis and postattack damage assessment rely equally upon the same data base and computer capability. As previously stated, an electronic computer and computer programs are available at the National Resource Evaluation Center (NREC). The weakest link in the damage assessment system is the data base. The prime objective of the OCD damage assessment program in fiscal year 1962 was to strengthen the data base by making it current. Through contracts with Federal agencies, which either have these data or have the capability of obtaining them, OCD sought to achieve these improvements.

Contracts negotiated with the U.S. Bureau of the Census, Department of Commerce, were designed to:

1. Provide maps for each of the standard locations used in the 1960 Census. This mapping service will enable census data to be correlated

geographically with OCD survey data; e.g., population distribution relative to shelters located.

2. Modify Census Bureau tabulations to provide selected data for use at NREC. The Office of Emergency Planning (OEP) cosponsored this project with OCD.

3. Provide periodic sampling of owner-occupied homes for estimating the number of family fallout shelters being constructed.

4. Provide a sampling of daytime and nighttime population in standard locations. These data will be used to check accuracy of population figures collected by architects and engineers in the National Shelter Survey.

OCD contracted with the U.S. Office of Education, DHEW, to produce an inventory of elementary and secondary schools. The location, nature of construction, capacity, and other data on schools are considered basic resource data, because schools are generally the most centrally located community facilities with a cadre potentially capable of civil defense operations.

Contracts with the U.S. Public Health Service provided for:

1. Locating and obtaining important data on water systems in communities having 20,000 or more population. The precise geographical location and data on critical portions of these water systems are essential information for preattack vulnerability analysis and post-attack damage assessment.

2. Producing additional data on health manpower. In addition to considerable data already available on doctors, nurses, dentists, and hospitals, information is needed on pharmacists, sanitary engineers, local health facilities, and other health resources.

3. Surveying the location characteristics of health care centers.

The Department of Agriculture signed a contract with OCD to:

1. Determine the exact location and quantity of wholesale and retail food stocks throughout the Nation.

2. Estimate the amount of food possessed by various types of families or consumers.

Contracts negotiated with the Department of the Interior provided for identifying and locating the storage capacity and quantity of petroleum fuel in approximately 28,000 facilities having less than 25,000-barrel capacity. Information on facilities of greater capacity was already available.

Contractual arrangements with the U.S. Weather Bureau, Department of Commerce, included provisions for:

1. Estimating potential fallout areas and forecasts based on weather data.

2. Maintaining a meteorological staff at the main OCD relocation site.

3. Developing a program for computing fallout winds.

**Hazard Probability**

In addition to improving the data base, OCD sought additional information on what effects various attacks would have on the Nation's resources. Through a contract with the Army Ordnance Facility, electronic computer equipment was made available for this purpose. The equipment, similar to that maintained at NREC, was used for hazard probability studies to provide data for vulnerability analyses and preattack planning; e.g., need for stockpiles, best location of stockpiles, areas of greatest attack danger, possible areas of heavy fallout, and best location for emergency operating centers.

## **PART V**

### **FEDERAL ASSISTANCE PROGRAMS AND ACTIVITIES**

The basic objective of all Federal assistance programs and activities is to help State and local governments develop effective civil defense capabilities, especially fallout shelter for all their citizens. In consonance with current OCD policy during fiscal year 1962, major emphasis was on community shelters and on programs and activities to make effective use of fallout shelters.

#### **TECHNICAL ASSISTANCE AND GUIDANCE**

During fiscal year 1962, the paramount need for coordinated technical assistance and guidance to State and local governments became increasingly evident. This need became acute in implementing and carrying out the operations of the National Shelter Program. Technical assistance was the basic requirement for competent execution of this complex but essential program. But guidance was the prime requirement in achieving a shelter-oriented civil defense with adequately balanced priorities for other needs. These other needs included numerous programs and activities for making effective use of shelters; e.g., warning, emergency communications, radiological monitoring, damage assessment, and training of civil defense personnel.

In recognition of the need for coordinated technical assistance and guidance to State and local civil defense officials, OCD organized its headquarters and regional office staffs to provide these services. Some of the resulting activities and accomplishments are described in the succeeding paragraphs.

*Policy direction.*—State Governors and Civil Defense Directors were briefed on new civil defense program developments. Consequently, they issued directions to local officials for revising and updating of civil defense programs and activities. OCD regional personnel held statewide meetings with local officials to assist them in this process.

*Program direction and guidance.*—OCD regularly issued guidance and instructional materials on civil defense programs and individual projects to assure a coordinated approach among technical staffs of regional, State, and local officials. In addition, special attention was given to providing policy guidance and supervision to the U.S. Army Corps of Engineers, the U.S. Navy Bureau of Yards and Docks, and

their architect-engineer contractors in identifying and marking shelters under the National Shelter Program. By compiling and analyzing data on the development of this program, OCD was able to monitor the early operational stages and identify implementation difficulties. Recommendations for correcting these difficulties were made accordingly.

To gain first hand Federal, State, and local experience for guidance in identifying, marking, and stocking of shelters, a test project known as Shelter One was started in January and pursued until May 1962. The final test operations included shelters in 120 buildings located in Washington, D.C., and 13 other cities in separate States. As a result, 120 shelters with a total of more than 74,000 shelter spaces were licensed. Of these shelters, 118 with a total capacity of nearly 74,000 shelter spaces were stocked. Analyses of the problems encountered in this comprehensive operation led to considerable improvement in methods and procedures for large-scale marking, licensing, and stocking of shelters. In addition, valuable experience was gained in procurement, warehousing, distribution and handling of supplies.

To pursue further the solution to problems in shelter marking and stocking, 24 cities were selected in May for onsite monitoring of the program. Three of these cities are located in each OCD region, and current analysis of the operational status has enabled OCD to provide local civil defense directors valuable information on conducting shelter stocking operations.

Obtaining signed licenses from building owners to permit the public use of shelter space sometimes poses a problem for local officials. In May, OCD began a nationwide tabulation of progress in license signing. Evaluation of information from this source should help overcome this problem to a considerable extent.

In addition to providing technical assistance and guidance in surveying, marking, and stocking of shelters, OCD assisted State and local governments in development of shelter-oriented programs balanced with essential civil defense activities conducive to effective use of shelters. Guidance material was prepared on shelter management, community shelters, civil defense organization and planning, and revision of State operational survival plans. Federal matching funds totaling more than \$2.9 million were authorized for construction of emergency operating centers. (See Emergency Operating Centers under Protective Structures in Part III.) Principal emergency services activities included:

1. *Fire*.—OCD conducted Staff College seminars for fire executives in which 105 persons participated. With the help of outstanding experts in fire protection, OCD prepared a preliminary draft of a fire operations guide.

2. *Public works*.—Regional public works seminars were held to acquaint key engineering and public works personnel with their emergency responsibilities, and to prepare guidance material for developing emergency operational programs.

3. *Law enforcement*.—To qualify a cadre of police officials in each State for training local police in emergency responsibilities, OCD conducted regional seminars for 376 police chiefs. In addition, OCD promoted police training in radiological monitoring and in explosive ordnance reconnaissance provided by the U.S. Army. Instructions and other guidance material on organizing and directing law enforcement personnel for civil defense were made available to the States.

### TRAINING AND EDUCATION

After transfer of civil defense functions to the Department of Defense early in fiscal year 1962, OCD concentrated upon reorienting all training and education activities to support current priorities in providing shelter protection, and to make effective use of fallout shelters in local communities. Consequently, training and education were focused upon well defined objectives to: (1) Train those key leaders specifically responsible for planning and directing civil defense operations, (2) provide skilled civil defense workers, and (3) provide for educating the public in use of shelters; e.g., the public must learn where shelters are, when to go and how to get to them, how to live in them, and what to expect upon leaving them to enter a postattack environment. OCD sought to attain these objectives by working through its schools, with State and local civil defense officials, and with educational leaders.

*OCD schools*.—OCD schools in operation at the end of June 1962, were the Staff College, Battle Creek, Mich., and the Civil Defense Training Centers at Alameda, Calif., and Brooklyn, N.Y. The number of graduates of these schools totaled 6,690 persons for the year: 2,487, from Staff College including 880 in travel-team classes; 1,411 from the Alameda center; and 2,792 from the Brooklyn center.

Major changes in OCD schools included:

1. Reduction of course subjects offered to concentrate limited resources on activities directly concerned with the new shelter-oriented program. Courses selected for this purpose were Radiological Monitoring for Instructors, Civil Defense Management, Shelter Management Instructor, Radiological Defense Officer, and Planning and Operations.

2. Concentration on training key leaders scheduled to be active in State and local civil defense.

3. Emphasis on training of instructors scheduled to train local civil defense personnel.

4. Incorporation of the Chemical, Biological, and Radiological Defense School into Staff College as a Department of Technical Training.

*Public education.*—The Civil Defense Adult Education Program, established in fiscal year 1960, operates through regular adult education channels and contractual arrangements with the U.S. Office of Education. Under fiscal year 1962 contract by which \$979,228 was obligated, the program was continued in 15 States and was expanded to 20 additional States, the District of Columbia, and Puerto Rico. Plans call for expanding the program to cover all States in fiscal year 1963. The program was originally designed to develop an understanding of the role of the individual, the family, and the community in civil defense. In fiscal year 1962, the course was expanded and redesigned to: (1) Develop knowledge and understanding of organizations and plans for civil defense, and (2) encourage individual and group participation in local civil defense, with particular emphasis on the fallout shelter program. These changes were being incorporated into a revised student manual and instructor guide.

During fiscal year 1962, 2 seminars were held at OCD Staff College to train additional State personnel selected to conduct similar seminars for training local teachers in this program. Upon certification by their State, local teachers were qualified to teach a 12-hour OCD-prescribed course for adults. Federal funds allocated under State contract were used to finance instruction without charge to persons taking the course.

More than 18,600 teachers have been trained in civil defense adult education who subsequently have conducted adult education classes from which approximately 425,000 persons have been graduated. In fiscal year 1962, about 13,000 of these teachers were trained and more than 261,000 persons were graduated from civil defense adult education classes.

In addition to the Civil Defense Adult Education Program, OCD maintained working relationships with major national education organizations to secure their support and assistance in civil defense. Special attention was focused on providing them with information on developing and carrying out civil defense plans in public schools and colleges. Direct assistance was extended to schools and colleges in the form of guidance, technical information, and instructional materials.

*Medical self-help training.*—The Medical Self-Help Program was developed under OCD contract with the U.S. Public Health Service, DHEW. The Council on National Security of the American Medical Association cooperated in development of the program and approved its purpose and objectives. Medical self-help training is designed to enable a person to meet emergency health needs if professional medical care is unavailable for prolonged periods.

In preparation for beginning nationwide training in medical self-help, representatives of each State attended a series of workshops conducted during the fall of 1961. The reference manual for the course was distributed to State and local civil defense directors and members of the American Medical Association. Distribution of 4,385 training kits for use in support of the program was started in January 1962. During the latter part of fiscal year 1962, an initial trial phase of medical self-help training was started in each of the 50 States. At the end of June 1962, the course had been taught in 531 classes and completed by 11,503 students; 1,334 classes were in progress.

To obtain information for planning effective use of this program in civil defense, a survey was conducted of students, instructors, and administrative officials who participated in it. Results of the survey were presented to a civil defense advisory committee (see Advisory Committees in Part VII, and Appendix 6) specifically established to analyze and make recommendations on medical self-help training. The recommendations will be available for consideration in fiscal year 1963.

### FINANCIAL ASSISTANCE

The Office of Civil Defense, Department of Defense, provided Federal matching funds to States, Territories, and Possessions by authority of Public Law 920, 81st Congress, as amended by Public Law 85-606.

Funds obligated for supplies, equipment, and facilities during fiscal year 1962 totaled more than \$9 million. (See table 3.) Major contributions during fiscal year 1962 were for communications, warning, engineering, and emergency operating centers. Other civil defense activities assisted by matching funds included emergency welfare services, health and special weapons defense, public information, training and education, and chemical, biological and radiological defense.

Approximately \$9.7 million was made available to help State and local governments pay essential personnel and administrative costs. During fiscal year 1962, all States, the District of Columbia, Guam, American Samoa, the Virgin Islands, and more than 900 of their political subdivisions participated in this program. (See table 4.) All State and local employment supported by these funds was required to be under a merit system satisfying Federal standards. The number of participating subdivisions in fiscal year 1962 was about 30 percent greater than that of the preceding fiscal year. According to available staffing plans, paid State and local employees performing civil defense functions totaled approximately 4,400 in fiscal year 1962, an increase of approximately 700 or 21 percent since the end of June 1961.

The program for partial reimbursement of travel and per diem expenses of students attending OCD schools was continued to encourage training of State and local civil defense personnel. Course completion certificates issued to students under this program during fiscal year 1962 totaled 2,896, and the amount reimbursed was \$176,134. Cumulative expenditures since the beginning of the program in fiscal year 1960 totaled \$336,626; and completion certificates issued totaled 5,458. Average expenditure per course completed by a student was approximately \$62.

**TABLE 3.—Fiscal year 1962 Federal contributions for supplies, equipment, facilities and training**

Area	Amount obligated	Area	Amount obligated
Total.....	\$9, 124, 588	Region 4—Continued	
Region 1.....	3, 015, 679	Michigan.....	\$241, 426
Connecticut.....	117, 766	Minnesota.....	143, 418
Maine.....	243, 782	Wisconsin.....	153, 641
Massachusetts.....	181, 776	Region 5.....	1, 653, 058
New Hampshire.....	37, 115	Arkansas.....	262, 876
New Jersey.....	925, 399	Louisiana.....	142, 713
New York.....	1, 442, 337	New Mexico.....	7, 037
Rhode Island.....	45, 117	Oklahoma.....	560, 150
Vermont.....	5, 701	Texas.....	680, 282
Puerto Rico.....	16, 686	Region 6.....	722, 616
Virgin Islands.....		Colorado.....	347, 665
Region 2.....	808, 757	Iowa.....	20, 187
Delaware.....	7, 184	Kansas.....	62, 688
Dist. of Columbia.....	15, 479	Missouri.....	52, 721
Kentucky.....	22, 703	Nebraska.....	90, 928
Maryland.....	383, 891	North Dakota.....	107, 630
Ohio.....	101, 769	South Dakota.....	6, 101
Pennsylvania.....	208, 826	Wyoming.....	34, 696
Virginia.....	64, 569	Region 7.....	1, 127, 221
West Virginia.....	4, 336	Arizona.....	22, 274
Region 3.....	751, 264	California.....	962, 328
Alabama.....	44, 428	Hawaii.....	71, 180
Florida.....	222, 978	Nevada.....	19, 262
Georgia.....	72, 871	Utah.....	49, 599
Mississippi.....	32, 627	American Samoa.....	
North Carolina.....	266, 979	Guam.....	2, 578
South Carolina.....	75, 492	Region 8.....	221, 644
Tennessee.....	35, 889	Alaska.....	1, 511
Canal Zone.....		Idaho.....	14, 833
Region 4.....	824, 349	Montana.....	16, 956
Illinois.....	143, 017	Oregon.....	47, 506
Indiana.....	142, 847	Washington.....	140, 838

TABLE 4.—Federal contributions for civil defense personnel and administrative expenses, fiscal year 1962

Area	Political subdivisions		Amount obligated <sup>1</sup>
	Number participating	Staff	
Total.....	916	4,385	\$9,677,081
Region 1.....	68	1,153	2,504,970
Connecticut.....	8	45	140,963
Maine.....	9	60	126,153
Massachusetts.....	6	120	152,000
New Hampshire.....	0	10	24,109
New Jersey.....	21	151	241,586
New York.....	20	693	1,713,000
Rhode Island.....	3	52	55,959
Vermont.....	1	18	44,400
Puerto Rico.....			
Virgin Islands.....		4	6,800
Region 2.....	82	565	982,606
Delaware.....	3	24	44,014
Dist. of Columbia.....	0	22	59,334
Kentucky.....	6	47	86,946
Maryland.....	15	104	189,187
Ohio.....	11	72	148,125
Pennsylvania.....	23	205	271,070
Virginia.....	11	48	120,500
West Virginia.....	13	43	63,430
Region 3.....	233	705	1,503,255
Alabama.....	43	115	243,000
Florida.....	25	115	250,100
Georgia.....	58	152	369,000
Mississippi.....	21	49	90,797
North Carolina.....	40	141	283,600
South Carolina.....	35	82	167,941
Tennessee.....	11	51	98,817
Region 4.....	192	594	1,485,267
Illinois.....	25	92	232,816
Indiana.....	10	56	163,105
Michigan.....	37	124	319,351
Minnesota.....	76	161	393,074
Wisconsin.....	44	161	376,921
Region 5.....	54	326	721,579
Arkansas.....	4	41	130,000
Louisiana.....	8	110	198,718
New Mexico.....	3	23	52,841
Oklahoma.....	13	67	130,906
Texas.....	26	85	209,114

See footnotes at end of table.

TABLE 4.—*Federal contributions for civil defense personnel and administrative expenses, fiscal year 1962—Continued*

Area	Political subdivisions		Amount obligated <sup>1</sup>
	Number participating	Staff	
Region 6.....	171	395	709, 883
Colorado.....	16	47	130, 988
Iowa.....	8	30	62, 879
Kansas.....	30	55	97, 297
Missouri.....	20	79	137, 382
Nebraska.....	14	46	76, 744
North Dakota.....	45	63	104, 342
South Dakota.....	19	36	56, 631
Wyoming.....	19	39	43, 620
Region 7.....	61	441	1, 316, 913
Arizona.....	5	44	89, 417
California.....	47	12	1, 006, 700
Hawaii.....	4	38	120, 037
Nevada.....	2	14	41, 101
Utah.....	3	22	45, 250
Samoa.....		3	2, 989
Guam.....		8	11, 419
Region 8.....	55	206	452, 608
Alaska.....	2	11	44, 484
Idaho.....	24	48	71, 490
Montana.....	6	16	27, 200
Oregon.....	9	45	110, 000
Washington.....	14	86	199, 434

<sup>1</sup> Excludes amounts obligated to States by the Office of Civil and Defense Mobilization during July 1961, totaling \$814,201.

### SURPLUS PROPERTY

Public Law 655, 84th Congress, authorized the donation of Federal surplus property for use in any State for civil defense purposes. Since Congress authorized such action in 1957, property having an acquisition cost of approximately \$217.3 million has been transferred to the States. Federal surplus property valued at approximately \$35.3 million was donated to the States during fiscal year 1962. (See table 5.) Trucks, electric generators, and firefighting equipment ranked high on the list of fiscal year 1962 donations.

### EMERGENCY SUPPLIES AND EQUIPMENT INVENTORY

An inventory of emergency supplies and equipment under the direction of OCD was valued at approximately \$23 million at the end of fiscal year 1962. Included in this inventory were 45 ten-mile units of engineering equipment valued at more than \$10 million. Stored at 21 strategic locations throughout the Nation, this equipment was

available for local emergency postattack use as needed in the pumping and purification of water.

The remaining part of the inventory consisted of radiological defense equipment valued at approximately \$11 million, and chemical and biological defense equipment valued at almost \$2 million. This equipment included instruments and other items being packaged into kits for use at radiological monitoring stations and Government approved shelters.

The procurement and management of medical supply inventories became the responsibility of the Department of Health, Education, and Welfare under Executive Order 10958, effective August 14, 1961.

**TABLE 5.—Federal surplus property transferred to State and local governments for civil defense purposes**

[In thousands of dollars]

Area	Acquisition cost of transferred property <sup>1</sup>	
	Fiscal years 1957-62	Fiscal year 1962
Total .....	\$217, 337	\$35, 292
Region 1 .....	35, 676	6, 166
Connecticut .....	4, 582	520
Maine .....	4, 576	667
Massachusetts .....	7, 888	1, 661
New Hampshire .....	1, 686	497
New Jersey .....	5, 896	1, 666
New York .....	7, 330	222
Rhode Island .....	1, 388	486
Vermont .....	678	161
Puerto Rico .....	1, 652	287
Virgin Islands .....		
Region 2 .....	22, 044	2, 654
Delaware .....	195	24
Dist. of Columbia .....		
Kentucky .....	2, 366	288
Maryland .....	4, 279	632
Ohio .....	3, 318	156
Pennsylvania .....	6, 957	403
Virginia .....	3, 992	903
West Virginia .....	938	249
Region 3 .....	43, 006	9, 649
Alabama .....	6, 740	1, 279
Florida .....	13, 044	2, 696
Georgia .....	9, 631	2, 002
Mississippi .....	3, 698	2, 299
North Carolina .....	6, 143	771
South Carolina .....	2, 217	447
Tennessee .....	1, 533	155
Canal Zone .....		

See footnotes at end of table.

TABLE 5.—Federal surplus property transferred to State and local governments for civil defense purposes—Continued

[In thousands of dollars]

Area	Acquisition cost of transferred property <sup>1</sup>	
	Fiscal years 1957-62	Fiscal year 1962
Region 4.....	\$27, 560	\$3, 063
Illinois.....	6, 890	581
Indiana.....	4, 384	517
Michigan.....	10, 929	1, 415
Minnesota.....	3, 319	320
Wisconsin.....	2, 037	229
Region 5.....	26, 423	4, 048
Arkansas.....	4, 939	522
Louisiana.....	7, 072	858
New Mexico.....	999	50
Oklahoma.....	3, 060	420
Texas.....	10, 353	2, 199
Region 6.....	14, 723	2, 042
Colorado.....	3, 283	398
Iowa.....	895	95
Kansas.....	1, 138	126
Missouri.....	3, 416	333
Nebraska.....	1, 372	103
North Dakota.....	1, 299	357
South Dakota.....	1, 843	312
Wyoming.....	1, 478	317
Region 7.....	38, 251	6, 573
Arizona.....	1, 324	360
California.....	32, 298	5, 389
Hawaii.....	266	84
Nevada.....	782	268
Utah.....	3, 580	473
American Samoa.....		
Guam.....		
Region 8.....	9, 654	1, 097
Alaska.....	1, 154	152
Idaho.....	1, 720	158
Montana.....	497	73
Oregon.....	1, 931	262
Washington.....	4, 352	452

<sup>1</sup> Figures may not add to exact totals due to rounding.

## PART VI

### RESEARCH

Simultaneously triggered by a substantial increase in appropriated funds and transfer of major civil defense functions to the Department of Defense, fiscal year 1962 developments marked a period of evaluation, reorganization, and expansion in civil defense research. Consequently, OCD redirected research activities to: (1) Seek more economical hardware and operational procedures for civil defense, (2) make civil defense systems more effective, (3) increase reliability of men and machines for postattack operations, (4) improve readiness of the entire civil defense program, and (5) provide more useful data for making basic decisions in planning and operating civil defense programs.

The approach used in achieving these objectives was to identify a large number of small research tasks of well-defined scope rather than a small number of large broad-scope tasks. The main purpose of this was to intensify the research effort on specific problems and thereby produce urgently needed solutions more expeditiously. With approximately \$16 million invested in research, 208 specific research tasks were under contract at the end of June 1962. Results from these projects were anticipated for fiscal year 1963. Percentages of funds allocated to various types of research groups were:

	<i>Percent</i>
Department of Defense (DOD)-----	18.1
Federal agencies exclusive of DOD-----	15.8
Educational institutions-----	5.0
Private organizations, including industrial laboratories, research institutes and foundations, and quasi-Government agencies----	61.1
Total-----	100.0

OCD organized civil defense research pursuits into four major functional categories: Shelter, support systems, postattack, and systems evaluation. Each category is described in succeeding paragraphs and funds obligated are shown in table 6.

TABLE 6.—Obligation of funds for research, fiscal year 1962

Type of research	Amount
Total-----	<sup>1</sup> \$16, 049, 571
Shelter -----	5, 614, 356
Protective studies-----	2, 035, 174
Environmental studies-----	702, 410
Subsistence and habitability studies-----	711, 489
Component development-----	655, 060
Shelter management studies-----	595, 870
Systems verification studies-----	340, 493
Advanced concepts studies-----	573, 860
Support systems-----	4, 402, 140
Detection and investigation studies-----	1, 129, 365
Command and control-----	1, 137, 005
Evacuation and movement control studies-----	220, 830
Damage control and medical aid-----	657, 730
Reduction of vulnerability-----	256, 550
Basic research studies-----	1, 000, 660
Postattack -----	1, 625, 372
Fallout reclamation techniques-----	737, 842
Damage repair studies-----	253, 050
Recovery procedures studies-----	461, 090
Basic research studies-----	173, 390
Systems evaluation-----	4, 407, 703
Damage assessment computation-----	615, 667
Identification of feasible systems-----	417, 090
Systems analysis research-----	685, 665
Program requirements study-----	497, 880
Weapons effects studies-----	1, 500, 000
Psychological and sociological studies-----	691, 401

<sup>1</sup>Excludes \$1,920,932 of obligations for development projects and prototype shelters, and \$22,513 reimbursable obligations for fire research advisory services.

### SHELTER

Shelter research principally concerns further exploratory development of design, construction, and use of shelters. In development of shelter design and construction, basic consideration is given to radiological shielding, blast and fire resistance, and shelter components; e.g., material and utility requirements. In development of shelter use, special attention is given to the environment within shelters, to requirements for sustaining life, and to managing shelter operations.

Shelter research underway during fiscal year 1962 placed major emphasis upon:

1. *Protection studies*.—Investigation of shielding from initial and residual nuclear radiation, analysis of thermal radiation hazard, methods of protection from blast effects, and requirements for protection from biological agents and toxic chemicals.

2. *Environmental studies*.—Identification, analysis, and alleviation of harmful environmental factors to make shelters habitable; e.g., control of heat and humidity.

3. *Subsistence and habitability studies*.—Water, food, medical items, and equipment required for sustaining life and making shelters livable.

4. *Component development*.—Shelter materials and utility requirements such as water, power, and sewage systems.

5. *Management studies*.—Study of shelter occupancy and provision of guidance material for shelter occupants.

6. *Systems verification studies*.—Experimental studies to verify extent to which identified shelters are habitable.

7. *Advanced concept studies*.—Investigation of such problems as use of explosive excavation for shelter construction, deep shelter, and underwater shelters.

### SUPPORT SYSTEMS

Support systems research includes all research and exploratory development covering all civil defense functions and systems up to the postattack system except shelter research; e.g., studies in vulnerability reduction, warning, command and control, communications, damage control, medical aid, radiation detection, and evacuation or movement control. Most hardware research has been concentrated upon completing development of radiological defense instruments. In addition, studies were being completed on damage control and on command and control functions.

During fiscal year 1962, OCD undertook major long-range analyses of operational requirements for civil defense radiation detection, communications, and warning systems. Research projects were planned to improve the operation of these systems by exploiting the results of these analyses.

Research on medical support systems was undertaken in cooperation with the Department of Health, Education, and Welfare. This work has resulted in development of improvised medical measures applicable to civil defense.

OCD participation in weapons tests resulted in obtaining useful data on fallout and in testing of an excellent radiological aerial instrument. In addition, data obtained from studies and analysis of movement control proved useful in considering evacuation as a strategic civil defense measure.

## POSTATTACK

Postattack research principally concerns exploratory development of systems and functions applicable to civil defense operations during the restoration period; e.g., decontamination, damage repair, control and sustenance of surviving population, and procedures for coping with postattack conditions.

In this research area, the objective is to investigate (1) the long-term effects and hazards of nuclear attack and (2) the means available to the Nation for recovering from these effects. These investigations include consideration of fallout effects for a prolonged time in the postattack period. Fallout theory and detailed technical data on fallout, especially on fallout formation and distribution, must therefore be used to project fallout patterns in these studies.

Countermeasures under investigation for postattack use included:

1. Decontamination of outside surfaces, water, and food exposed to fallout.
2. Methods and procedures for restoring utilities, repairing damage, and clearing debris.
3. Means for dealing with health, psychological, and sociological problems.

Participation in a weapons test enabled OCD to collect and analyze many types of radiation measurements. Included in the test were six manned shelters. Radiation measurements, taken in five of the shelters which were exposed to fallout, provided experimental data on the amount of protection afforded. In addition, several civil defense and military radiological instruments were tested.

## SYSTEMS EVALUATION

Systems evaluation research principally concerns studies of weapons effects, systems analysis, development of damage assessment data, and sociological and psychological factors in civil defense. In addition, this area of research includes studies to determine civil defense program requirements and to identify feasible systems.

OCD has derived considerable useful information from systems evaluation research. Active projects during fiscal year 1962 placed major emphasis upon:

1. *Weapons effects studies*.—Investigation of fallout decay and thermal measurement, fallout survey methods, other fallout phenomenology, fire potential of weapons, and psychological and sociological effects of nuclear attack.
2. *Systems analysis*.—Studies of strategic and tactical requirements for performing civil defense functions, and investigation of improved methods for testing operational plans.

3. *Damage assessment.*—Formulation of computer models for estimating mass spread of fire and biological and chemical warfare agents, improvement of data sources, and use of data for damage assessment, and examination of feasibility of alternative civil defense countermeasures.

4. *Sociological and psychological studies.*—Public attitudes toward civil defense, methods of communicating with the public, and interaction between civil defense and arms control.

5. *Civil defense implications posed by alternative counterforce defense systems.*

## PART VII

### SUPPORTING ACTIVITIES

In addition to the nationwide fallout shelter system and the complementary civil defense systems, the President's civil defense program includes several important supporting activities or programs. These activities are necessary to inform the public of civil defense, to gain and maintain support of industry and national organizations, and to provide nationwide and worldwide perspective to the program.

In addition to other programs and activities described in this part of the report, the American National Red Cross (ANRC) has always played an important role in supporting civil defense. The ANRC has trained millions of persons in courses which are universally recognized as necessary for civil defense preparedness; e.g., first aid, home nursing, and emergency mass feeding. This type of training continued to be available through the cooperative efforts of the ANRC and its widely dispersed field chapters. At the national level, an ANRC representative was assigned to civil defense liaison work, and an ANRC adviser was on loan for duty at each of the 8 OCD regional offices.

### PUBLIC INFORMATION

The President, on May 25, 1961, in his special message to the Congress on *Urgent National Needs* and the tense Berlin situation set the pace for an accelerated public information program which predominated throughout fiscal year 1962. On July 25, 1961, the President laid the foundation for this program by describing what the Government proposed to do in civil defense, and he set the theme when he added: "In the coming months, I hope to let every citizen know what steps he can take without delay to protect his family in case of attack."

The major emphasis of the OCD public information program was on the need for fallout protection for all Americans and what was being done to provide it. In addition, the need for home shelters and a balanced civil defense program conducive to effective use of all shelters was publicized.

*Public media.*—OCD used public media of all types to inform the public of work in progress to establish community shelters in public and private buildings, and to explain the President's proposed incentive-payment program which would provide millions of additional fallout shelter spaces in structures belonging to nonprofit health, educational, and welfare institutions. Informational press releases

focused public attention on progress in the National Shelter Program. Governments at all levels, industry and business organizations, and individuals were informed of their responsibilities and opportunities to help in providing nationwide fallout protection and a balanced civil defense program.

Through news releases, periodicals, trade journals, special publications, films, radio and television scripts, speeches, photographs, exhibits, and personal contacts, OCD told the civil defense story to both general and specialized audiences. In addition, technical information on weapons' effects and fallout shielding was widely circulated.

Civil defense exhibits were displayed at conventions and other public gatherings totaling more than 5 million persons in 125 cities. About 20,000 literature-holder counter displays were distributed for State and local use.

More than 1,900 new prints of civil defense motion pictures were released during fiscal year 1962. In March, the Army Film and Equipment Exchanges began distributing all OCD films. Two new motion pictures, Objective Survival and Protection Factor 100, were produced and distributed. One additional film, All About Fallout, was in production at the end of the fiscal year.

OCD developed a variety of material for use by radio and television stations; e.g., the spot-announcement film-slide kits, Fallout Protection Booklet, City Shelter, and Sign of Survival. The film, Protection Factor 100, was distributed to all television stations. A new television film on community civil defense was in the first stages of production. More than 2,500 local radio stations used the OCD weekly series Stars for Defense, and national networks continued to feature the OCD-sponsored series Entertainment USA and Startime USA. In addition, a six-part civil defense radio series was being developed for distribution to all radio stations.

*Publications.*—At the President's direction, the Department of Defense published and distributed, in January 1962, a 48-page OCD handbook, Fallout Protection: What To Know and Do About Nuclear Attack. Of 35 million copies of the handbook printed in fiscal year 1962, 31 million copies were distributed. The New York Times printed the handbook in full, and many other newspapers printed excerpts from it. Ten newspapers distributed more than a million copies as Sunday supplements. Several business organizations and schools also distributed large quantities of the handbook.

To provide construction details on low-cost family fallout shelters described in the fallout protection handbook, OCD prepared and published 10 million copies of another handbook entitled Family Shelter Designs. At the end of fiscal year 1962, more than 8 million copies of this handbook had been distributed.

For use by local organizations, OCD prepared an informational kit, Organized Action for Civil Defense. The kit contained a guide on how to organize support for civil defense, especially for the fallout shelter program. By the end of fiscal year 1962, 70,000 kits had been produced, and 12 national organizations had agreed to distribute kits to local groups.

The OCD issued 31 information bulletins primarily for use of State and local civil defense directors. The Department of Defense issued 64 news releases on civil defense. Approximately 50 million copies of other civil defense publications of various types were issued during fiscal year 1962.

*National organizations.*—Major national organizations (see also Industrial Participation and Labor Support) and many community leaders cooperated with OCD in support of civil defense, especially in expressing support of the nationwide shelter program. OCD presented 12 national organizations with certificates of appreciation for their support. Through nationally adopted resolutions or by letters from their official leaders, 11 national organizations pledged their support of the shelter program. These organizations were the American Legion, American Hospital Association, American Veterans of World War II and Korea (AMVETS), American Veterans Committee, Disabled American Veterans, Fraternal Order of Eagles, Governors' Conference, National Association of County Officials, Regular Veterans Association, U.S. Conference of Mayors, and the Veterans of Foreign Wars.

In its resolution on civil defense, the Governors' Conference recommended that the President of the United States send a special communication to the Congress emphasizing the continued urgency of the proposed Shelter Incentives Program and urging its enactment. The report (see Appendix 7) accompanying the resolution included the following statement: *As Governors, we share a primary responsibility for the safety and well-being of our people. As Governors we shall continue to do all that is within our ability to protect our citizens from the hazards of nuclear attack. Our success in this task, however, will be greatly determined by the quality and firmness of the leadership at the national level.*

The National Association of State Civil Defense Directors, the United States Civil Defense Council, and the executive committees and subcommittees of these organizations worked closely in a consultative capacity with OCD.

The Outdoor Advertising Association of America, in its fourth year of vigorous civil defense support, ordered 2,950 large billboard posters for nationwide display to familiarize the public with the standard yellow and black fallout shelter symbol. At the end of fiscal

year 1962, the total value of civil defense promotion space contributed by this organization was estimated at more than \$650,000 and included more than 19,000 large display posters.

Examples of other organizations which promoted the shelter program by publicity, shelter construction, and/or demonstration were the American Legion, AMVETS, B'nai B'rith, Catholic War Veterans of U.S.A., Civitan International, Explorer Scouts, Fraternal Order of Eagles, U.S. Junior Chamber of Commerce, Lions International, and the Veterans of Foreign Wars.

*Public-support survey.*—As part of a project in the OCD public information program, Michigan State University (MSU) conducted a study during fiscal year 1962 which indicated strong public support for a fallout shelter program that would include:

1. Marking and provisioning existing large buildings for use as shelters.
2. Changing existing buildings to provide shelter space.
3. Including fallout shelter space in the design of new, larger buildings.
4. Governmental assistance in helping schools, colleges, and hospitals to adapt existing buildings for use as public fallout shelters.

The survey revealed that 71 percent of the people contacted across the Nation believe the Government is conducting the right kind of fallout shelter program or should do even more in this area.

The survey is part of a larger research project being conducted for the Department of Defense by the Department of Communication at MSU. The larger study involves variable factors in the public's understanding and acceptance or opposition to civil defense and the fallout shelter program. (See Michigan State University Poll, Appendix 8.)

## INDUSTRIAL PARTICIPATION

The main objective of the OCD Industrial Participation Program is to aid industry in planning, establishing, and maintaining civil defense programs. In fiscal year 1962, OCD worked with business and industrial leaders to gain their active cooperation in (1) expediting the National Fallout Shelter Program and (2) supporting and participating in Federal, State, and local civil defense programs.

*Information.*—Business and industrial organizations supported civil defense with their publications and house media to disseminate information of special interest to industrial civil defense. Outstanding examples of this support were:

1. The editors of McGraw-Hill Book Co., Inc., prepared a 16-page article, Nuclear Attack and Industrial Survival, which was published in 39 trade and professional magazines with a combined circulation of nearly two million readers.

2. The Chamber of Commerce of the United States, in the December issue of *Nation's Business*, published an article entitled *Survival Plans Your Company Can Use*.

3. The September 1961 issue of *The Journal of American Society of Training Directors* was completely devoted to civil defense training.

4. The Emergency Planning Committee of the Millers' National Federation, Washington, D.C., prepared a series of bulletins, *Industry Action Program—Civil Defense*, telling its members what to do and how to do it in planning for civil defense in the milling industry.

5. Newspapers and periodicals carried many articles on civil defense planning in industry, and OCD was permitted to make reprints for further distribution. Among these were the *Wall Street Journal*, *Business Management*, *Business Week*, *Administrative Management*, *Harvard Business Review*, *Journal of American Medical Association*, *Occupational Hazards*, *Electric Light and Power*, *Electrical World*, *Oil and Gas Magazine*, *Industry and Power*, *Factory*, *Factory Management*, *Ordnance Magazine*, and *Plant Engineering*.

6. As a result of articles in the December *Burroughs Clearing House*, OCD received 250 inquiries on emergency operations in banking and savings and loan associations. More than 200 requests for information on preservation of records resulted from civil defense information in the October 21, 1961, issue of the *Kiplinger Letter*.

*Industry training.*—Executives completing the one-week course in *Industry Defense and Survival* conducted at the OCD Staff College brought the total number to approximately 2,000. Included among them were representatives from most States and 50 foreign countries. The course was offered twice in fiscal year 1962, and a course for industry was also conducted at Omaha, Nebr.

OCD encouraged colleges and universities to include industry defense courses in their curricula. Michigan and Pennsylvania State Universities, the Agricultural and Mechanical College of Texas, and Indiana and Purdue Universities conducted such courses. In addition, about 52 colleges and universities now accept industry defense subjects as suitable for term papers.

*Conferences and meetings.*—OCD encouraged trade, professional and industrial associations, schools and colleges, and State and regional government agencies to hold conferences and seminars on industry defense problems. Approximately 60 major meetings of this type were held in fiscal year 1962. An estimated 100,000 business, professional, and other leaders have been briefed on industrial civil defense in this manner.

Approximately 1,500 industrial trade associations and professional organizations disseminated information on procedures for developing

industrial survival programs. An estimated 6 million employees have received civil defense information in the process.

*Shelter development.*—In addition to cooperating with Federal, State, and local civil defense officials in the National Shelter Program, many industrial establishments have provided shelters for their employees. Among these establishments were large aircraft, chemical, communications, insurance, banking, machine tool, and miscellaneous industrial corporations. Industry also progressed extensively in stocking shelters with survival equipment and in training personnel in lifesaving and property protection. In many instances plant protection personnel have been registered with their local governments for auxiliary fire, police, rescue or radiological monitoring activities.

### LABOR SUPPORT

Organized labor continued its wholehearted and effective support of civil defense during fiscal year 1962 by adapting its nationwide civil defense activities to the new program and by placing the weight of its members behind the National Shelter Program and related activities.

Highlights of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) accomplishments were:

1. The New Jersey State Building Trades, the Connecticut Federation of Labor, and the Iowa State Federation of Labor adopted State policy resolutions defining their civil defense activities.
2. The AFL-CIO Legislative Department made effective presentations to the Congress in support of civil defense. This activity represented the coordinated effort of 38 State labor organizations. Information concerning it was distributed to 2.5 million members of the building and construction trades.
3. The AFL-CIO Public Affairs Department conducted a civil defense panel discussion in which the Assistant Secretary of Defense (Civil Defense) participated. Approximately 136 stations of the Mutual Broadcasting Co. carried the program.
4. Study of a training program was initiated for the Industrial Union of Marine and Shipbuilding Workers of America and the American Federation of Teachers.
5. The Union Label Industry Show, Portland, Oreg., displayed civil defense exhibits to 203,000 persons and distributed 40,000 Fallout Protection booklets in the Portland metropolitan area.
6. Under the auspices of the Michigan State Building and Construction Trades, representatives of the OCD Staff College made a major civil defense presentation before the State convention of 400 key labor union officials. The building trades in Michigan support highly or-

ganized civil defense activities which are coordinated by union officials throughout the fifteen districts of these organizations in the State.

7. The Building-Tradesmen, official organ of the Michigan State Building and Construction Trades, with a circulation of 110,000, published four articles supporting the civil defense program of the organization's Civil Defense Committee. Weekly and monthly periodicals of labor organizations throughout the Nation also published civil defense information.

## INTERNATIONAL ACTIVITIES

Under arrangements coordinated with the Department of State, OCD maintained relations with many friendly nations. Principal activities included the exchange of public and technical information, consultation among civil defense officials, and participation in international conferences in relation to civil defense activities of the North Atlantic Treaty Organization (NATO), the Central Treaty Organization (CENTO), and Canada.

The Special Assistant to the Secretary of Defense represented the United States at the twentieth meeting of the NATO Civil Defense Committee, and OCD staff members represented the United States at a joint meeting of the NATO Shelter and Scientific Working Parties held in May 1962. These representatives also observed civil defense activities in England and Switzerland. In addition, OCD assisted the Department of State in preparation of documents for use in presenting the position of the United States at meetings of the NATO Senior Civil Emergency Planning Committee (SCEPC) and several of its technical committees and work groups concerned with communications, warning, and firefighting.

Under the auspices of the Women's Voluntary Services of England, an OCD staff member toured that country to study civil defense activities. Prior to attending the Third Civil Affairs Conference of the Strategic Headquarters Allied Powers Europe (SHAPE), held in April 1962, the United States delegation to that conference consulted with OCD staff members.

As customary, OCD continued to furnish training material and other publications to member nations of CENTO. In addition, OCD represented the United States at the fourth annual CENTO meeting of civil defense experts, held in March 1962, at Rawalpindi, Pakistan.

The United States maintained close liaison with Canada on civil defense activities of mutual interest to both nations. The Canadian Clerk of the Privy Council and the Director of the Canadian Emergency Measures Organization met in Washington, D.C., for a conference with United States officials; i.e., the Director of the Office of Emergency Planning and the Assistant Secretary of Defense (Civil

Defense). In addition, a Canadian representative presented a briefing in Washington, D.C., on the role of the Canadian Armed Forces in national survival.

New civil defense publications, released by the United States during fiscal year 1962, created a great deal of interest in foreign countries. In response to approximately 900 requests from 52 countries, OCD sent copies of these publications abroad and granted several nations permission to reproduce several booklets for their own use. Canada, Denmark, the Netherlands, Norway, Sweden, and West Germany provided OCD with copies of their civil defense publications which had been widely distributed among their own citizenry.

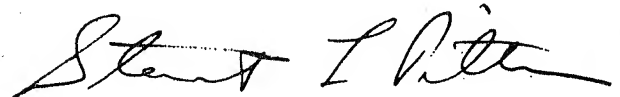
OCD held briefings and conferences in Washington, D.C., and/or Battle Creek, Mich., attended by officials from Australia, Belgium, Canada, China, England, Indonesia, Korea, the Netherlands, the Republic of the Philippines, Sweden, Thailand, the United Arab Republic, and West Germany. Representatives from several foreign countries attended OCD schools. In addition, the official in charge of the NATO Civil Emergency Planning Office conferred in Washington, D.C., with the Assistant Secretary of Defense (Civil Defense) and his staff.

#### ADVISORY COMMITTEES

The Assistant Secretary of Defense (Civil Defense) established three advisory committees (see appendixes 4, 5, and 6) during the fiscal year 1962, as follows:

1. Civil Defense Industry Advisory Committee on the National Emergency Alarm Repeater (NEAR) System.
2. Civil Defense Advisory Committee on the Design and Construction of Public Fallout Shelters.
3. Civil Defense Advisory Committee on the Medical Self-Help Training Program.

The chairman of each advisory committee is a fulltime salaried Government official, and the committee members are outstanding representatives in such fields as industry, business, science, engineering, education, medicine, and government. Each member is a person whose position, experience, and talent enable him to make a major contribution to achievement of OCD objectives. The function of each committee is solely to advise the Assistant Secretary of Defense (Civil Defense).



*Assistant Secretary of Defense (Civil Defense)*  
STUART L. PITTMAN

## APPENDIX 1

### EXECUTIVE ORDER 10952

#### ASSIGNING CIVIL DEFENSE RESPONSIBILITIES TO THE SECRETARY OF DEFENSE AND OTHERS

WHEREAS the possibility of enemy attack upon the United States must be taken into account in developing our continental defense programs; and

WHEREAS following a thorough review and consideration of our military and nonmilitary defense activities, I have concluded that adequate protection of the civilian population requires a substantial strengthening of the Nation's civil defense capability; and

WHEREAS the rapid acceleration of civil defense activities can be accomplished most effectively and efficiently through performance by the regular departments and agencies of government of those civil defense functions related to their established roles and capabilities; and

WHEREAS I have concluded that the undertaking of greatly accelerated civil defense activities, including the initiation of a substantial shelter program, requires new organizational arrangements:

NOW, THEREFORE, by virtue of the authority vested in me as President of the United States and Commander-in-Chief of the armed forces of the United States, including the authority contained in the Federal Civil Defense Act of 1950, as amended, and other authorities of law vested in me pursuant to Reorganization Plan No. 1 of 1958, it is hereby ordered as follows:

#### SECTION 1.—*Delegation of Authority to the Secretary of Defense.*

(a) Except as hereinafter otherwise provided and as it is reserved to the Office of Civil and Defense Mobilization in section 2 of this order, the Secretary of Defense is delegated all functions (including as used in this order, powers, duties, and authority) contained in the Federal Civil Defense Act of 1950, as amended (hereinafter referred to as the Act), vested in me pursuant to Reorganization Plan No. 1 of 1958 (72 Stat. 1799), subject to the direction and control of the President. Such functions to be performed by the Secretary of Defense, working as necessary or appropriate through other agencies by contractual or other agreements, as well as with State and local leaders, shall include but not be limited to the development and execution of:

- (i) a fallout shelter program;

(ii) a chemical, biological, and radiological warfare defense program;

(iii) all steps necessary to warn or alert Federal military and civilian authorities, State officials, and the civilian population;

(iv) all functions pertaining to communications, including a warning network, reporting on monitoring, instructions to shelters, and communications between authorities;

(v) emergency assistance to State and local governments in post-attack period, including water, debris, fire, health, traffic, police, and evacuation capabilities;

(vi) protection and emergency operational capability of State and local government agencies in keeping with plans for the continuity of government; and

(vii) programs for making financial contributions to the States (including personnel and administrative expenses) for civil defense purposes.

(b) In addition to the foregoing, the Secretary shall:

(i) develop plans and operate systems to undertake a nationwide postattack assessment of the nature and extent of the damage resulting from enemy attack and the surviving resources, including systems to monitor and report specific hazards resulting from the detonation or use of special weapons; and

(ii) make necessary arrangements for the donation of Federal surplus property in accordance with section 203(j)(4) of the Federal Property and Administrative Services Act of 1949, as amended (40 U.S.C. 484(j)(4)), subject to applicable limitations.

SECTION 2.—*Civil Defense Responsibilities of the Office of Civil and Defense Mobilization.* The Director of the Office of Civil and Defense Mobilization shall

(a) Advise and assist the President in:

(i) determining policy for, planning, directing and coordinating, including the obtaining of information from all departments and agencies, the total civil defense program;

(ii) reviewing and coordinating the civil defense activities of the Federal departments and agencies with each other and with the activities of the States and neighboring countries in accordance with section 201(b) of the Act;

(iii) determining the appropriate civil defense roles of Federal departments and agencies, and enlisting State, local and private participation, mobilizing national support, evaluating progress of programs, and preparing reports to the Congress relating to civil defense matters;

(iv) helping and encouraging the States to negotiate and enter into interstate civil defense compacts and enact reciprocal civil defense legislation in accordance with section 201(g) of the Act, and

(v) providing all practical assistance to States in arranging, through the Department of State, mutual civil defense aid between the States and neighboring countries in accordance with section 203 of the Act.

(b) Develop plans, conduct programs, and coordinate preparations for the continuity of Federal governmental operations in the event of attack; and

(c) Develop plans, conduct programs, and coordinate preparations for the continuity of State and local governments in the event of attack, which plans, programs, and preparations shall be designed to assure the continued effective functioning of civilian political authority under any emergency conditions.

SECTION 3.—*Excluded Functions.* The following functions of the President under the provisions of the Act are excluded from delegations to the Secretary of Defense made by this order and are reserved to the President:

(a) Those under subsections (h) and (i) of section 201 of the Act (50 U.S.C. App. 2281 (h), (i)) to the extent that they pertain to medical stockpiles and food stockpiles.

(b) Those under the following provisions of the Act: Sections 102(a), 201(b), and 402 and Title III.

SECTION 4.—*Transfer of Property, Facilities, Personnel and Funds.* Subject to applicable law, there shall be hereby transferred to the Secretary of Defense such portion of the property, facilities, and personnel of the Office of Civil and Defense Mobilization engaged in the performance of the civil defense responsibilities herein assigned to the Secretary of Defense as shall be agreed upon by the Secretary and the Director of the Office of Civil and Defense Mobilization together with such portions of the funds currently available for those purposes as shall be approved by the Director of the Bureau of the Budget.

SECTION 5.—*Reports.* The Secretary of Defense shall annually submit to the President a written report covering expenditures, contributions, activities, and accomplishments of the Secretary of Defense pursuant to this order.

SECTION 6.—*Redelegation.* The Secretary of Defense is hereby authorized to redelegate within the Department of Defense the functions hereinabove delegated to him.

SECTION 7.—*Amendment.* The Director of the Office of Civil and Defense Mobilization is hereby relieved of responsibilities under the Act except as otherwise provided herein, and the provisions of Executive Order No. 10773, as amended, are amended accordingly.

SECTION 8.—*Prior actions.*

(a) Except to the extent that they may be inconsistent with the provisions of this order, and except as particular Executive orders or other orders are amended, modified, or superseded by the provisions of this order, all determinations, authorizations, regulations, rulings, certificates, orders (including emergency preparedness orders), directives, contract agreements, and other actions made, issued, or entered into with respect to any function affected by this order, and not revoked, superseded, or otherwise made inapplicable before the date of this order, shall continue in full force and effect until amended, modified, or terminated by the President or other appropriate authority; but, to the extent necessary to conform to the provisions of this order, any of the foregoing shall be deemed to refer to the Secretary of Defense or other appropriate officer or agency instead of, or in addition to, the Office of Civil and Defense Mobilization or the Director thereof.

(b) This order shall not terminate any delegation or assignment of any substantive (program) function to any delegate agency made by any emergency preparedness order heretofore issued by the Director of the Office of Civil and Defense Mobilization (26 F.R. 651-662; 835-840) (which emergency preparedness order shall remain in effect until amended or revoked by or at the specific direction of the President). No such emergency preparedness order shall limit the delegation or assignment of any substantive (program) function to the Secretary of Defense made by the foregoing sections of this order.

SECTION 9.—*Effective Date.* This order shall become effective on the first day of August, 1961.

JOHN F. KENNEDY.

THE WHITE HOUSE,  
July 20, 1961

## APPENDIX 2

### DEPARTMENT OF DEFENSE MEMORANDUM RELATING TO ESTABLISHMENT OF THE OFFICE OF CIVIL DEFENSE

THE SECRETARY OF DEFENSE,  
*Washington, July 31, 1961.*

Memorandum for:

The Secretaries of the Military Departments.  
The Director of Defense Research and Engineering.  
The Chairman of the Joint Chiefs of Staff.  
The Assistant Secretaries of Defense.  
The General Counsel.  
The Special Assistant and the Assistants to the Secretary of Defense.  
The Administrative Assistant to the Secretary of Defense.  
The Administrative Secretary.  
The Director, National Security Agency.  
The Chief, Defense Atomic Support Agency.  
The Chief, Defense Communications Agency.

Subject: Interim organization and operation of the Office of Civil Defense within the Department of Defense.

Reference: (a) EO10952, dated July 20, 1961, assigning civil defense responsibilities to the Secretary of Defense and others.

Pending the early appointment of an individual to be responsible for civil defense functions assigned to the Department of Defense by reference (a), Mr. Adam Yarmolinsky, Special Assistant to the Secretary of Defense, will, effective August 1, 1961, under the direction, authority, and control of the Secretary of Defense:

1. Assume responsibility for those functions, and,
2. Organize and establish an Office of Civil Defense within the DOD.

The authorities delegated to the Secretary of Defense under reference (a) are hereby redelegated to the Special Assistant to the Secretary of Defense.

This assignment will be canceled automatically effective with the qualification of a successor for this responsibility.

(Signed) ROBERT S. McNAMARA



## APPENDIX 3

August 31, 1961  
NUMBER 5140.1

Admin. Asst./SecDef

### DEPARTMENT OF DEFENSE DIRECTIVE

SUBJECT: Assistant Secretary of Defense (Civil Defense)

References: (a) E.O. 10952, dated July 20, 1961, assigning Civil Defense Responsibilities to the Secretary of Defense and Others.

(b) SecDef memo dated July 31, 1961, Subj: Interim Organization and Operation of the Office of Civil Defense within the DOD (canceled herein).

Pursuant to the authority vested in the Secretary of Defense, the provisions of reference (a), and the National Security Act of 1947, as amended, there is hereby established within the Department of Defense an Office of Civil Defense. One of the positions of Assistant Secretary of Defense authorized by the National Security Act of 1947, as amended, is designated as Assistant Secretary of Defense (Civil Defense) to head the Office of Civil Defense.

The responsibilities, functions, powers and authorities assigned to the Secretary of Defense by reference (a) are hereby redelegated to the Assistant Secretary of Defense (Civil Defense). These authorities will be exercised under the direction, authority and control of the Secretary of Defense and may be redelegated by the Assistant Secretary of Defense (Civil Defense) to such personnel in the Office of Civil Defense as he determines necessary to the effective performance of civil defense functions.

The Assistant Secretary of Defense (Civil Defense) will, in carrying out the responsibilities herein assigned, utilize to the maximum extent the existing facilities of the Department of Defense in lieu of duplicating such facilities within his office.

The Office of Civil Defense will be provided such personnel, facilities, and other support as the Secretary of Defense determines to be necessary.

Reference (b) is canceled upon issuance of this directive which is effective immediately.

Deputy Secretary of Defense

Inclosure—1

Delegations of Authority

**ENCLOSURE 1 TO DEPARTMENT OF DEFENSE DIRECTIVE  
5140.1, DATED JANUARY 20, 1962**

**DELEGATIONS OF AUTHORITY**

Pursuant to the authority vested in the Secretary of Defense, the Assistant Secretary of Defense (Civil Defense), or, in the absence of the Assistant Secretary, the person acting for him is hereby delegated, subject to the direction, authority, and control of the Secretary of Defense, and in accordance with DOD policies, directives, and instructions, and pertinent OSD regulations, authority as required in the administration and operation of the Office of Civil Defense and its subordinate activities to:

1. Exercise the powers vested in the Secretary of Defense by Section 204 of the National Security Act of 1947, as amended (5 USC 171d), Section 12 of the Administrative Expenses Act of 1946, as amended (5 USC 22a), and Sections 401(a) and 403(b) of the Federal Civil Defense Act of 1950, as amended (50 USC App. 2253 (a) and (b)), pertaining to the employment, direction and general administration of civilian personnel of the Office of Civil Defense and its subordinate activities.

2. Fix rates of pay for wage board employees exempted from the Classification Act by Section 202(7) of that Act on the basis of prevailing rates for comparable jobs in the locality where the Office of Civil Defense or each subordinate activity is located. The Assistant Secretary of Defense (Civil Defense), in fixing such rates, shall follow the wage schedule established by the local wage board.

3. Establish such advisory committees and employ such part-time advisers as approved by the Secretary of Defense for the performance of civil defense functions pursuant to the provisions of the Federal Civil Defense Act of 1950, as amended (50 USC App. 2253(b)) and Executive Order 10242, dated May 8, 1951 (16 FR 4262), as appropriate, or 10 USC 173, 5 USC 55a, and the Agreement between the DOD and the Civil Service Commission on employment of experts and consultants, dated July 22, 1959.

4. Administer oaths of office incident to entrance into the Executive Branch of the Federal Government or any other oath required by law in connection with employment therein, in accordance with the provisions of the Act of June 26, 1943 (5 USC 16a), and Section 403(b) of the Federal Civil Defense Act of 1950, as amended (50 USC App. 2253(b)), and designate in writing, as may be necessary, officers and employees of the Office of Civil Defense and its subordinate activities to perform this function.

5. Establish an Office of Civil Defense Incentive Awards Board and pay cash awards to and incur necessary expenses for the honorary recognition of civilian employees of the Government whose suggestions, inventions, superior accomplishments, or other personal efforts, including special acts or services, benefit or affect the Office of Civil Defense or its subordinate activities in accordance with the provisions of the Act of September 1954 (5 USC 2123) and Civil Service Regulations.

6. In accordance with the provisions of the Act of August 26, 1950, as amended (5 USC 22-1); Executive Order 10450, dated April 27, 1953, as amended; and DOD Directive 5210.7, dated August 12, 1953 (as amended) :

a. Designate any position in the Office of Civil Defense and its subordinate activities as a "sensitive" position;

b. Authorize, in case of an emergency, the appointment of a person to a sensitive position in the Office of Civil Defense and its subordinate activities for a limited period of time for whom a full field investigation or other appropriate investigation, including the National Agency Check, has not been completed; and

c. Authorize the suspension, but not the termination, of the services of an employee in the interest of national security in positions within the Office of Civil Defense and its subordinate activities.

7. Clear civil defense personnel and such other individuals as may be appropriate for access to classified Defense material and information in accordance with the provisions of DOD Directive 5210.8, dated June 29, 1955 (as amended), "Policy on Investigation and Clearance of Department of Defense Personnel for Access to Classified Defense Information" and of Executive Order 10501, dated November 5, 1953, as amended.

8. Act as agent for the collection and payment of employment taxes imposed by Chapter 21 of the Internal Revenue Code of 1954 and, as such agent, make all determinations and certifications required or provided for under Section 3122 of the Internal Revenue Code of 1954 and Sections 205(p) (1) and (2) of the Social Security Act, as amended (42 USC 405(p) (1) and (2)) with respect to employees of the Office of Civil Defense and its subordinate activities.

9. Authorize and approve overtime work for civilian officers and employees of the Office of Civil Defense and its subordinate activities in accordance with the provisions of Section 25.221 of the Federal Employee Pay Regulations.

10. Authorize and approve :

a. Travel for civilian officers and employees in connection with civil defense activities in accordance with the Standardized Government Travel Regulations as amended (BOB Circular A-7, Revised) ;

b. Temporary duty travel only for military personnel assigned or detailed to the Office of Civil Defense or its subordinate activities in accordance with Joint Travel Regulations for the Uniformed Services, dated April 1, 1951, as amended;

c. Invitational travel to persons serving without compensation whose consultive, advisory, or other highly specialized technical services are required in a capacity that is directly related to or in connection with civil defense activities, pursuant to the provisions of Section 5 of the Administrative Expenses Act of 1946, as amended (5 USC 73b-2).

11. Approve the expenditure of funds available for travel by military personnel assigned or detailed to the Office of Civil Defense or its subordinate activities for expenses incident to attendance at meetings of technical, scientific, professional or other similar organizations in such instances where the approval of the Secretary of Defense or his designee is required by law (5 USC 174a). This authority cannot be redelegated.

12. Develop, establish, and maintain an active and continuing Records Management Program for the Office of Civil Defense and its subordinate activities, pursuant to the provisions of Section 506(b) of the Federal Records Act of 1950, (44 USC 396(b)).

13. Establish and use Imprest Funds for making small purchases of material and services other than personal for the Office of Civil Defense and its subordinate activities when it is determined more advantageous and consistent with the best interests of the Government, in accordance with the provisions of DOD Instruction 7280.1 and the Joint Regulation of the General Services Administration—Treasury Department—General Accounting Office, entitled "For Small Purchases Utilizing Imprest Funds."

14. Authorize the publication of advertisements, notices, or proposals in newspapers, magazines, or other public periodicals as required for the effective administration and operation of the Office of Civil Defense and its subordinate activities (44 USC 324).

15. a. Establish and maintain appropriate Property Accounts for civil defense property, equipment and supplies for which the Assistant Secretary of Defense (Civil Defense) is assigned responsibility.

b. Appoint Boards of Survey, approve reports of survey, relieve personal liability, and drop accountability for civil defense property contained in the authorized Property Accounts that has been lost, damaged, stolen, destroyed, or otherwise rendered unserviceable, in accordance with applicable laws and regulations.

16. Promulgate the necessary security regulations for the protection of property and places under the jurisdiction of the Assistant

Secretary of Defense (Civil Defense), pursuant to paragraphs III.A. and V.B. of DOD Directive 5200.8, dated August 20, 1954, and Section 403(a) of the Federal Civil Defense Act of 1950, as amended (50 USC App. 2255(a)).

17. Establish and maintain, for assigned civil defense functions, an appropriate publications system for the promulgation of regulations, instructions, and reference documents, and changes thereto, pursuant to the policies and procedures prescribed in DOD Directive 5025.1, dated March 7, 1961.

18. Enter into contracts for supplies, equipment and services for civil defense purposes and, subject to the limitation contained in Section 2311, Chapter 137, Title 10 USC, to make the necessary determinations and findings required under that chapter. To the maximum practicable extent, procurement of supplies and equipment will be accomplished through established military procurement agencies.

19. Enter into support and service agreements with the military departments, other DOD agencies, or other Government agencies as required for the effective performance of assigned civil defense responsibilities and functions.

20. Exercise the authority delegated to the Secretary of Defense by the Administrator of the General Services Administration with respect to the disposal of surplus civil defense personal property.

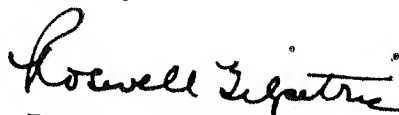
21. Purchase bonds to cover civil officers and employees and military personnel of the Office of Civil Defense and its subordinate activities, in accordance with Public Law 323, 84th Congress, (6 USC 14) and regulations of the Department of the Treasury (31 CFR, Part 226).

The above-delegated authorities are in addition to those contained in DOD Directive 5140.1, dated August 31, 1961, Executive Order 10952, dated July 20, 1961, and the Federal Civil Defense Act of 1950, as amended.

The Assistant Secretary of Defense (Civil Defense) may redelegate these authorities, as appropriate, and in writing except as otherwise specifically indicated above or as otherwise provided by law or regulation.

This delegation of authorities is effective immediately.

Secretary of Defense memorandum, "Interim Delegation of Administrative Authorities for Civil Defense Functions," July 31, 1961, and Deputy Secretary of Defense memorandum, "Delegation of Administrative Authorities for Civil Defense Functions," September 2, 1961, are superseded by this delegation of authority.

  
Deputy Secretary of Defense.



## APPENDIX 4

NUMBER 5030.21  
DATE April 27, 1962

ASD(CD)

### DEPARTMENT OF DEFENSE INSTRUCTION

SUBJECT: Advisory Committee on the Design and Construction of Public Fallout Shelters

- Refs.:
- (a) DoD Directive 5030.13, "Regulations for the Formation and Use of Advisory Committees"
  - (b) Executive Order 11007, "Prescribing Regulations for the Formulation and Use of Advisory Committees," February 26, 1962

#### I. GENERAL

A Department of Defense Advisory Committee on the Design and Construction of Public Fallout Shelters is hereby established to advise the Assistant Secretary of Defense (Civil Defense). The purpose, membership, and operation of the Committee are set forth below.

#### II. PURPOSE

The purpose of the Advisory Committee on the Design and Construction of Public Fallout Shelters is to:

- A. Review and make recommendations on the operating problems of providing incentives for shelter construction and of effecting proper utilization of shelter space in existing buildings.
- B. Provide means for effective communications relating to shelter design and construction between the Office of Civil Defense, Department of Defense and the membership of the associations named below.
- C. Recommend methods of stimulating shelter construction through development of plans and designs, by reducing shelter construction costs, and by communicating to the building trades and building owners technical information conducive to shelter construction.

#### III. MEMBERSHIP

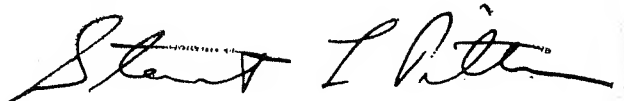
This Committee shall be representative of the American Institute of Architects, the American Society of Civil Engineers,

the Associated General Contractors of America, Incorporated, the National Society of Professional Engineers, the Engineers Joint Council, and the American Institute of Planners. Total membership shall consist of thirteen members.

- A. There shall be two members from each of the six professional organizations named above. One of the two members shall be an officer, the other a staff member, of the organization represented.
- B. One member, a full time, salaried Government official designated by the Assistant Secretary of Defense (Civil Defense), shall be Chairman of the Committee.
- C. If a vacancy occurs on the Committee, it shall be filled in the same manner as the original appointment.

#### IV. OPERATION

- A. The Committee shall be organized and operated in accordance with references (a) and (b) above.
- B. The Chairman shall call each meeting of the Committee, and shall formulate the agenda of each meeting. He shall make provision for taking minutes of each meeting, and shall certify the accuracy of summary minutes thereof. He shall have the authority to adjourn any meeting whenever he feels that its continuation would not be in the public interest.
- C. The functions of the Committee are solely advisory, and any determination of action to be taken, based in whole or in part on such advice, shall be made by the Assistant Secretary of Defense (Civil Defense).



Assistant Secretary of Defense  
(Civil Defense)



## APPENDIX 5

NUMBER 5030.20  
DATE *March 12, 1962*

ASD(CD)

### DEPARTMENT OF DEFENSE INSTRUCTION

SUBJECT: Industry Advisory Committee on the National Emergency Alarm Repeater (NEAR) System

- Refs.: (a) DOD Directive 5030.13, "Public Advisory Committees"
- (b) Executive Order 11007 dated February 27, 1962, Prescribing Regulations for the Formation and Use of Advisory Committees

#### I. GENERAL

A Department of Defense National Emergency Alarm Repeater (NEAR) System Industry Advisory Committee is hereby established to advise the Assistant Secretary of Defense (Civil Defense). The purpose, membership and operation of the committee are set forth below.

#### II. PURPOSE

The purpose of the NEAR System Industry Advisory Committee is to provide advice to the Office of Civil Defense, Department of Defense, regarding the ongoing NEAR system investigation and implementation program. The NEAR system involves the utilization of the nationwide facilities of the power companies and introduces complex problems of installation and testing.

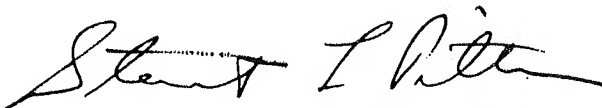
#### III. MEMBERSHIP

- A. The total membership shall consist of twelve (12) members; three each from the private, public, and rural electrification utilities, and three from the Department of Defense.
- B. The Chairman of the Committee shall be a full time, salaried government official, designated by the Assistant Secretary of Defense (Civil Defense).

#### IV. OPERATION

- A. The Committee shall be organized and operated in accordance with references (a) and (b) above.

- B. The Chairman will call each meeting of the Committee, formulate the agenda for each meeting, and have the authority to adjourn any meeting whenever he feels that its continuation would not be in the public interest.
- C. The functions of the Committee are solely advisory and any determination of action to be taken, based in whole or in part on such advice, shall be made by the Assistant Secretary of Defense (Civil Defense).

A handwritten signature in dark ink, appearing to read "Stuart L. Pittman". The signature is fluid and cursive, with the first name "Stuart" written in a larger, more prominent script than the last name "Pittman".

STUART L. PITTMAN  
*Assistant Secretary of Defense*  
(Civil Defense)

## APPENDIX 6

### DEPARTMENT OF DEFENSE MEMORANDUM RELATING TO CIVIL DEFENSE ADVISORY COMMITTEE ON THE MEDICAL SELF-HELP PROGRAM

*June 13, 1962*

*MEMORANDUM FOR* The Secretaries of the Military Departments  
The Director of Defense Research & Engineering  
The Assistant Secretary of Defense (Comptroller)  
The Assistant Secretary of Defense (Public Affairs)  
The Assistant to the Secretary of Defense (Legislative Affairs)  
The Assistant Secretary of Defense (Manpower)  
The Deputy Assistant Secretary (Health & Medical)  
The General Counsel  
The Special Assistant to the Secretary of Defense  
The Administrative Assistant  
The Administrative Secretary

SUBJECT: Civil Defense Advisory Committee on the Medical Self-Help Training Program

Reference: DOD Directive 5030.13, "Regulations for the Formation and Use of Advisory Committees," April 20, 1962

#### 1. GENERAL

A Civil Defense Advisory Committee on the Medical Self-Help Training Program is hereby established to advise the Assistant Secretary of Defense (Civil Defense). The function, membership, and operation of the Committee are set forth below.

#### 2. FUNCTIONS

The Civil Defense Advisory Committee on the Medical Self-Help Training Program shall:

- a. Analyze an interim report of the initial phase of the Medical Self-Training Program.
- b. Make recommendations relative to the following major segments of the report:

- (1) Professional content of course material.
- (2) Methodology of instruction, including availability and effectiveness of voluntary instructors.
- (3) Techniques of program implementation.
- (4) Usefulness of training to the Shelter Program.

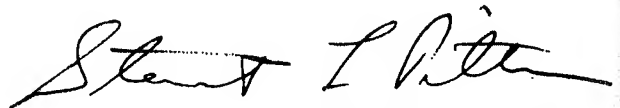
### 3. MEMBERSHIP

This Committee shall consist of representatives of:  
Bureau of Medicine and Surgery, Navy Department  
Medical School, Baylor University  
Disaster Committee, Allegheny County Medical Society, Penn.  
University Extension, University of California at Los Angeles  
Queens College, Charlotte, North Carolina  
Civil Defense State Directors Association  
United Community Funds & Councils, Inc., New York  
State Department of Health, Virginia  
Continuing Education Division, Pennsylvania State University  
Total membership shall consist of ten members.

- a. There shall be a total of nine members from the organizations named above.
- b. One member, a full-time salaried Government official designated by the Assistant Secretary of Defense (Civil Defense), shall be Chairman of the Committee.

### 4. OPERATION

- a. The Committee shall be organized and operated in accordance with reference above.
- b. The Chairman shall call each meeting and shall formulate the agenda of each meeting. He shall provide for taking summary minutes, shall certify to their accuracy, and shall adjourn any meeting whenever he feels that its continuation would not be in public interest.
- c. It is anticipated that the work of this Committee will be completed on or about July 19, 1962. In any event, termination of the Committee shall occur not later than August 15, 1962.
- d. The functions of the Committee are solely advisory, and any determination of action to be taken, based in whole or in part on such advice, shall be made by the Assistant Secretary of Defense (Civil Defense).



STUART L. PITTMAN

## APPENDIX 7

GOVERNOR'S CONFERENCE  
Fifty-fourth Annual Meeting  
Hershey, Pennsylvania  
*July 1-4, 1962*

### REPORT AND RESOLUTION COMMITTEE ON CIVIL DEFENSE

The Governors of our fifty states have, at each of their recent annual meetings, recommended with an increasing sense of urgency a nationwide program of fallout protection.

We have urged such a program because we believed it to be a matter of the utmost importance to the safety and security of the individual citizen, to the strength and survival of the nation and to the preservation of peace with freedom.

Our goal, a goal endorsed by President Kennedy in a communication to us last October, has been "to reach for fallout protection for every American as rapidly as possible." We, therefore, warmly support the proposed federal program for a more effective civil defense, with its vital emphasis on fallout protection for all of our people.

As Governors, we share a primary responsibility for the safety and well-being of our people. As Governors we shall continue to do all that is within our ability to protect our citizens from the hazards of nuclear attack. Our success in this task, however, will be greatly determined by the quality and firmness of the leadership at the national level.

It is especially important that a long term and steadfast national commitment be made both to this goal of protection and to a purposeful program designed to achieve it.

With this objective in mind, your Committee has cooperated with the federal authorities in the development of such a program. On September 17, 1961 we met in Washington with Secretary McNamara and Assistant Secretary Pittman for a general discussion of civil defense matters. Following the meeting, we presented to the President and to Secretary McNamara a series of recommendations for action in a number of areas: warning, evacuation, fallout protection, the preservation of law and order, the military forces, the stock-piling of food and medical supplies, post-attack rehabilitation and public

information. These recommendations were transmitted also to all Governors.

In November, the New York State Legislature, in extraordinary session, adopted legislation establishing a state shelter incentive program.

On December 11th, we met in New York City with Deputy Secretary of Defense Roswell Gilpatric to receive an advance briefing on the proposed new Federal Shelter Incentive Program. At the heart of this program is a shelter incentive proposal which would by incentive payments induce schools, hospitals and other welfare organizations to incorporate fallout protection in buildings they occupy.

On December 14th, following release of the federal program, your Committee issued a statement to all Governors, and to the Press, endorsing the federal proposal and pointing out that an effective civil defense, "with its primary emphasis on a group, community and family shelter program, will call for a cooperative effort by every level of government, by all of our institutions—business and non-profit—and by every citizen."

Embodied in the Committee's statement was a series of 12 recommendations for supporting actions by states and local governments. A majority of the states have already responded to a number of these recommendations with implementing measures. We urge that the 1962 Governors' Conference also register its endorsement of these recommendations.

We understand that the Federal Shelter Incentive Program, with its accompanying fund authorization, is still awaiting action by the Congress. Indeed, the Armed Services Committees of neither the House of Representatives nor the United States Senate, before whom the essential authorizing legislation is pending, have scheduled hearings or taken any other action to advance President Kennedy's civil defense program.

While action at the state level is a necessary ingredient in any effective civil defense effort, the goal of truly nationwide protection cannot be achieved without a meaningful federal program. We, therefore, wish to urge the President and the Congress to give this proposed federal shelter incentive and civil defense program their full and vigorous support.

The fact that, at the level of the federal government, the Secretary of Defense has been assigned responsibility for aspects of Civil Defense, while all matters relating to recovering and rehabilitation *following* a nuclear attack remain the responsibility of the Director of the Office of Emergency Planning, has given rise to a considerable degree of confusion and concern at State and local levels.

Both federal agencies have their regional organizations. Both are in contact with state and local officials. And both have programs

of action which in many states must be handled by a single organization, charged with both civil defense and emergency planning responsibilities.

Your Committee recognizes that the situation thus created poses serious administrative problems for our states and communities. However, it is scarcely a year since the President first announced this new alignment of federal responsibilities. The past twelve months have been largely a period of reorganization and reorientation for both federal agencies. Duplications and overlapping functions are still being sorted out, and the respective roles of the two agencies are now being clarified. Moreover, there is now evidence of far more vigorous and effective federal action in the fields of both civil defense and post-attack recovery than has been the case for many years past. In view of all the foregoing considerations, it is our belief that the 1962 Governors' Conference should urge all states to realign or reorient their own internal organization as necessary to insure a maximum of coordination and support for both the Office of Emergency Planning and the civil defense elements of the Department of Defense, in the development and implementation of their respective action programs. Your Committee plans to keep this matter under continuing review over the coming months and to offer additional comments and recommendations at the 1963 Governors' Conference.

As we continue our study of the problems of civil defense in a nuclear age, it is increasingly clear that much work remains to be done to assure the speedy recovery of our nation and its institutions following any attack. It is of first importance that we plan in advance of any attack how the surviving resources of people, equipment, material and services can be most effectively and promptly mobilized for the nation's welfare. Recovery and rehabilitation after a nuclear thrust against us is not an insoluble problem. The real challenge is to apply the knowledge we already have not only as to how to minimize the casualties and disruption from the attack itself but as to the measures which can impart speed and success to our efforts to make an early and effective recovery as a nation.

The present lack of adequate national planning for post-attack recovery is a serious gap in our nonmilitary defense. We recommend that the several states make a special effort in the coming year to initiate the studies and the plans which are needed on the local level to ascertain the best means by which specific communities can make the most effective recovery from any possible nuclear attack. To underscore the new and affirmative attention which we believe should be given by the Committee on Civil Defense to all aspects of the recovery and rehabilitation problem, we believe that the phrase "post-attack

recovery" should be added next year to the official name of this Committee.

Resolution Adopted by the  
Governors' Conference  
Fifty-fourth Annual Meeting  
Hershey, Pennsylvania  
July 2, 1962

### CIVIL DEFENSE

*Be it resolved* by the Governors' Conference that the report of the Committee on Civil Defense be adopted and that a copy thereof, together with this resolution be transmitted to the President of the United States with the recommendation that a special communication be sent to the Congress of the United States emphasizing the continued urgency of the proposed Federal Shelter Incentive Program and urging its enactment; and

*Be it further resolved* that the report of the Committee on Civil Defense be similarly transmitted to the Chairmen of the Armed Services Committees and of the Appropriation Committees of the House and Senate of the United States Congress with the recommendation that favorable action on the President's request for authorizing legislation and appropriations for civil defense be promptly taken; and

*Be it further resolved* that each state, to the extent it has not already done so, should:

- (a) Develop procedures and strengthen its organization to ensure that applications for federal aid are promptly processed and coordinated at state level, that advice and assistance are furnished to local jurisdictions on all aspects of their responsibilities under the federal program, and that state guidance is promulgated concerning planning and training for the utilization of all group and community shelters financed in whole or in part with public funds;
- (b) Exempt fallout shelters from increased property tax assessment;
- (c) Provide group shelter protection for the occupants of all state-owned buildings, as well as assist and encourage local jurisdictions to provide such shelter in public buildings;
- (d) To the extent feasible, provide financial incentives, in addition to those offered by the federal government, for the construction of group shelters by schools, universities and other nonprofit institutions;
- (e) Establish civil and criminal penalties for sellers and builders of shelters which are below civil defense standards and which are sold or built without prior notification to the buyer as to the substandard characteristics;

- (f) Modify, as necessary, state and local laws and regulations concerning building codes so as to permit fallout shelter construction in accordance with standards of effective shielding established by the federal government;
- (g) Provide on a statewide basis advice, assistance and other appropriate incentives for home, group and community shelter builders;
- (h) Ensure the provision of fallout-protected emergency operating facilities for essential elements of state and local government;
- (i) In cooperation with the federal government, augment existing early warning facilities to ensure adequate warning coverage throughout the state;
- (j) Establish State (Home) Guard forces, at least in cadre form;
- (k) Cooperate with the federal government in a program of studies, research and general education in the area of post-attack recovery and rehabilitation measures and procedures; and
- (l) Encourage and assist local governments to support and assist in carrying out the Federal Shelter Incentive Program; and

*Be it further resolved* that the Committee on Civil Defense undertake a study of the problems of recovery and rehabilitation following a nuclear attack and report to the 1963 Annual Meeting of the Governors' Conference as to the feasible steps which might be taken by all levels of government in cooperation with private institutions to strengthen our capacity as a nation not only to survive but to recover with all possible speed from any nuclear attack against us; and

*Be it further resolved* that the name of the "Committee on Civil Defense" of the Governors' Conference be changed henceforth to "Committee on Civil Defense and Post-Attack Recovery."

## APPENDIX 3

### MICHIGAN STATE UNIVERSITY POLL

1. One thing we are interested in is how people feel about the possibility of nuclear war in, say the next 10 to 20 years. In your opinion, what are the chances that a war will occur in which some country will attack the United States with nuclear weapons during the sixties or the seventies? Do you believe we will be attacked or we won't be attacked?

Will be attacked.....	Percent
Won't be attacked.....	26
Don't know.....	52
No reply.....	21
	1

2. Let's suppose there is a nuclear war. Think for a moment about people who live far enough away to escape the bomb blast. If these people have fallout shelters, what do you think their chances are for escaping death or severe radiation sickness from fallout radiation? Do you think they have a very good chance of avoiding radiation sickness, some chance, very little chance, or no chance of avoiding radiation sickness or death?

Very good chance.....	Percent
Some chance.....	21
Very little chance.....	36
No chance.....	25
Don't know.....	10
No reply.....	7
	1

3. The President, the Secretary of Defense, and some prominent scientists have said that America should have fallout shelters because fallout shelters will save a significant number of lives in case this country is attacked. Some other prominent scientists have disagreed. These scientists say that we should not have a shelter program because shelters won't save a significant number of lives in case of nuclear attack. How do you feel about this? Do you believe that shelters will or will not save a significant number of lives if we have an attack?

Will save a significant number of lives.....	Percent
Will not save a significant number of lives.....	51
Don't know.....	40
No reply.....	8
	1

4. The Government is completing a survey of large buildings, subways and the like. Enough corridors, inner rooms, basements and so on have been found to protect over 50 million people against fallout radiation. Should or should not these protected areas, which already exist, be marked and provisioned for use in an emergency?

	<i>Percent</i>
Should be marked and provisioned-----	86
Should not be marked and provisioned-----	7
Don't know-----	6
No reply-----	1

5. Many existing buildings would provide more fallout shelter if minor changes such as bricking basement window areas and addition of some ventilation equipment, are made in them. Are you in favor or opposed to a program for changing these existing buildings to provide more shelter space?

	<i>Percent</i>
In favor of changing existing buildings-----	64
Opposed to changing existing buildings-----	22
Don't know-----	13
No reply-----	1

6. Are you in favor or opposed to a program for including fallout shelter space in the design of new, larger buildings?

	<i>Percent</i>
In favor-----	68
Opposed to-----	20
Don't know-----	10
No reply-----	2

7. The Government is proposing to help schools, colleges and hospitals to meet the cost of making suitable rooms and basements in their buildings adequate as public fallout shelters. Are you in favor or opposed to this Government help?

	<i>Percent</i>
In favor-----	77
Opposed to-----	17
Don't know-----	5
No reply-----	1

8. (a) By surveying existing buildings and by financial assistance to schools, colleges and hospitals, the Government is trying to stimulate a national effort to provide protection against fallout for everyone in the United States within five years. Do you think the Government should do more to provide protection in the event of an attack, do you think this is just about

the right kind of program, or do you think the Government is doing too much in this area?

	<i>Percent</i>
Think the Government should do more-----	26
This is about the right kind of program-----	45
Think the Government is doing too much-----	14
Don't know-----	14
No reply-----	1

(b) What else do you think the Government should do?

	<i>Percent</i>
Develop shelter program-----	40
Educational campaign-----	11
Miscellaneous suggestions-----	49

(c) What do you think the Government is doing that it should not be doing?

	<i>Percent</i>
Spending and wasting too much money-----	40
Too much Federal activity-----	24
Government should quit promoting shelters— program won't work-----	10
Miscellaneous answers-----	26